

American Artisan

and Hardware Record

Sheet Metal Work—Warm Air Heating

Vol. 94, No. 13

CHICAGO, SEPT

1927

\$2.00 Per Year

A Progressive Sheet Metal Contractor / Why He Uses HORSE HEAD ZINC



Church at Kieler, Wis. Shingles and other sheet metal work made from Horse Head Zinc. Installed by E. W. Giese, Dubuque, Iowa.

"Easy to work"
"No complaints"
"For quality work"

All standard shapes and sizes of Horse Head Zinc conductors, gutters and fittings are made and distributed by the following fabricators.

DAVID LUPTON'S SONS CO. Philadelphia, Pa.
THE J. M. & L. A. OSBORN CO. Cleveland, Ohio.
Buffalo, New York
KLAUER MANUFACTURING CO. Dubuque, Ia.
HOLBROOK, MERRILL & STEFSON San Francisco, Cal.
Oakland and Los Angeles, Cal.
SHEET METAL MANUFACTURING CO., Inc. Brooklyn, N. Y.

The New Jersey Zinc Company
160 Front Street - New York City

New Jersey
zinc



E. W. GIESE
SHEET METAL
WORK

FURNACES

2023 RHOMBERG AVE.
DUBUQUE, IOWA.

METAL
SHINGLES
STEEL
CEILINGS
SPROUTING
ROOFING
and
JOB WORK

October 1, 1926.

Klauser Manufacturing Company,
Dubuque, Iowa.

Gentlemen:

I have used considerable Horse Head Zinc the past few years, laying several large Horse Head Zinc shingle roofs and rain spouting jobs.

→ I have found Horse Head Zinc easy to work and have had no complaints on any of the work I have used it on.

→ For quality work, I can recommend Horse Head Zinc.

ENG/G

Very truly yours,

E. W. Giese

THE NEW JERSEY ZINC COMPANY
160 Front Street - New York City

Please send me a sample of Horse Head Zinc so that I can test its easy working qualities.

NAME _____

ADDRESS _____

The Name that Identifies Successful Warm-Air Heating

MORE dealers have made more money selling and installing Calorics during the last ten years than any other warm-air furnace on the market.

Now—with a greatly improved product and one of the most attractive propositions ever offered to heating men, Caloric Dealers are enjoying constantly increasing business.

*The Best
Heat
Under
the Sun—*

Calorics are sold **ONLY THROUGH DEALERS**. Monitor has established an enviable reputation for working hand in hand with the men who have made the heating business their life's work.

Choice territories still available. If there is no Caloric Dealer in your town, write or wire at once for catalog, prices and terms.

The MONITOR FURNACE CO.

108 Years of Continuous Heating Service

CINCINNATI, OHIO



CALORIC PIPELESS

CALORIC PIPE



Made in two models—to take care of every domestic oil burner installation.

Model "A" Nozzle Type. **ELECTRICALLY IGNITED. OPERATED, CONTROLLED.**

Model "M" Pot Type. Highly efficient, absolutely dependable. Listed as standard by the Underwriter's Laboratories.

Complete information will be mailed on request. Write Now!

THIS is the SECOND FIRE

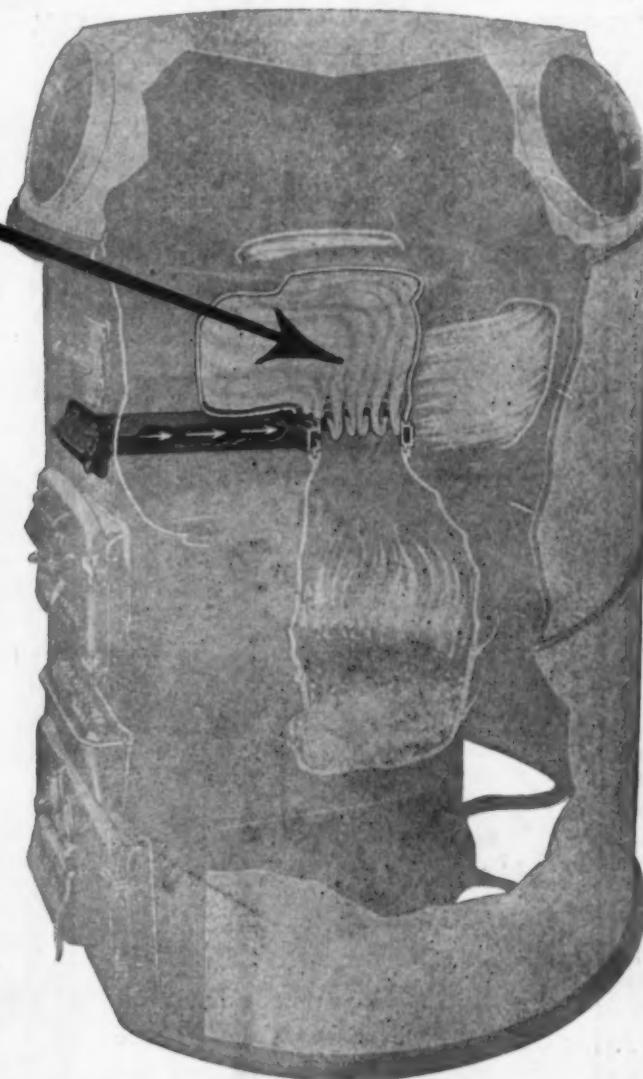
YOU can see the second fire created by the patented Carburetor in the Superior SUPER-SMOKELESS Furnace.

Your customers can see it, too, and that's one reason why it so often sells on sight.

And because this secondary fire uses otherwise wasted smoke, soot and gases for its fuel, it keeps the radiator and flues free from soot. Result, a furnace that is efficient at *all* times.

These facts make fast friends of your customers and sell *more* and *more* SUPER-SMOKELESS Furnaces for you.

Because the ability of the SUPER-



SMOKELESS Furnace to burn smoke, carbon and gases is *actually visible*, it lends itself to a remarkable *Sales Development Plan* which will make money for you. Write us for interesting details of this sales-making money-making plan.

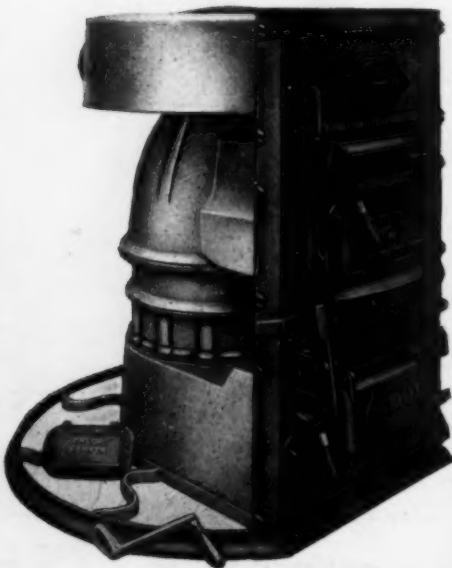
Utica Heater Co., Utica, N. Y.
Makers of Superior Pipe and New Idea Pipeless Furnaces
365 E. Illinois Street - - - Chicago, Ill.

SUPERIOR SUPER-SMOKELESS WARM AIR FURNACE

SUPERIOR DEALERS ARE EXCEPTIONALLY LOYAL—WHY?

LINCOLN
 WORTHY OF THE NAME
FURNACE

Worthy of the Name!



THE Lincoln Furnace is a real advance in warm air furnace construction. It is dust and gas tight. It has all joints covered. Its one piece radiator has all collars cast on. The feed section comes through the front. Large upright shaker operates Duplex shaking and dumping grates.

Worthy Features

1. Covered joints
2. Front shaker
3. One piece radiator with all collars cast on
4. Feed section through front
5. Duplex grates

Write for Catalog and Prices

**The American Foundry
& Furnace Company**

Dept. 400

BLOOMINGTON, ILL.

ROBINSON STEEL FURNACE

Made of
 TONCAN COPPER
 MO-LYB-DENUM IRON
 Fortified against
 RUST AND CORROSION



Designed According to the correct Rating Formula---

THAT means that it is an up-to-date furnace—not only built sturdily of the highest quality material but designed to render the highest heating efficiency.

Notice that there is plenty of room for cold air return and easy flow of air over radiating surfaces.

The ROBINSON is Electric Welded Throughout to insure absolute leak proof construction. It is furnished with one or two outlets as desired.

Notice that the radiator is supported independently—no weight on furnace drum.

New Dumping Device—One Piece Circular Grate—large water pan—lever shaker handle, and Shipped with front assembled are other features that you will appreciate.

The agency for the Robinson Steel Furnace means steady profits on a reliable furnace—write today for full details.

The A. H. ROBINSON COMPANY
 MASSILLON, OHIO

Mention AMERICAN ARTISAN in your reply—Thank you!

Your success is our success
Naturally we want to help you

A Sure-fire Formula For Your Success!

GOOD
MATERIALS

+

GOOD
WORK

+

ADVERTISING

=

SUCCESS

Here's a simple, sure-fire way to make money in the sheet metal business—simple as A, B, C—but certain: *Do good work; use only quality furnaces and fittings; let people know about the kind of work you do and the materials you use.*

There's absolutely nothing to keep you from succeeding if you follow this formula; barring, of course, "strikes, storms, fires, accidents, or causes beyond your control." We'll supply you with the quality materials

at a fair price and help you with the advertising to the people in your community. The skillful work, of course, is up to you.

Write to us and let us outline our time payment plan to you and explain what we will do to help you succeed.

LANGENBERG MANUFACTURING CO.

Since 1888

4545 N. Euclid Ave.

St. Louis, U. S. A.

Shipments made from St. Louis, Mo.; Lincoln, Nebr.; Richmond, Ind.; and Pittsburgh, Pa.



FRONT RANK

TRADE NAME REGISTERED

HEATING SYSTEMS

OVER 250,000 IN USE

Guaranteed by the makers, Langenberg Manufacturing Company, St. Louis, U. S. A. (to maintain an average inside temperature of 70° in zero weather), when installed according to the Standard Code.



L864

The Economical

NIAGARA

FURNACE



The NIAGARA is an engineering marvel of efficiency.

In design—in material—in workmanship—it is a finished product—the result of over thirty-five years of experience.

It embodies quality, ease of installation, attractive price and gives long service with freedom from repair.

Ask us about the Niagara
Dealer Franchise

Also Manufacturers of
Monarch Furnaces

THE FOREST CITY FOUNDRY & MFG. CO.
1220 Main Avenue
Cleveland, Ohio.



WALWORTH CASING RINGS

Made of Steel

Guaranteed Exact Measurements and True Circles

Our long years of experience and modern equipment enable us to make these casing rings high grade in every respect and fully guarantee them.

Walworth Casing Rings are made to individual requirements and measurements, full circles for ordinary use and partial circles for full cast fronts. With lugs for Double Casing and without lugs for Single Casing. Write today for descriptive circular and prices.

Made by the makers of Walworth Double Gratings, Semi-Steel Registers, Ventilators, Borders, Side Wall and Base Board Registers

THE WALWORTH RUN FOUNDRY COMPANY

West 27th St. and N. Y. C. & St. L. R. R., Cleveland, O.

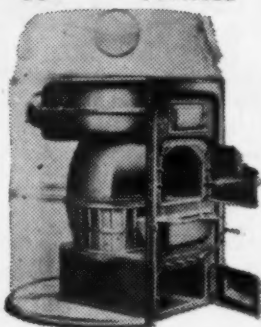
Distributors: ROBINSON FURNACE CO., Chicago, Ill.; HART MFG. COMPANY, Louisville, Ky.; PHILLIPS & BUTTORFF MFG. COMPANY, Nashville, Tenn. Eastern Representatives: PENN TINSMITH'S SUPPLY CO., Philadelphia, Pa.

Meeting the Needs of the Western Furnace Dealer

YEAR after year "Standard Line" dealers multiply in number and increase their percentage of the available business. This is mostly due to the completeness of "Standard Service."

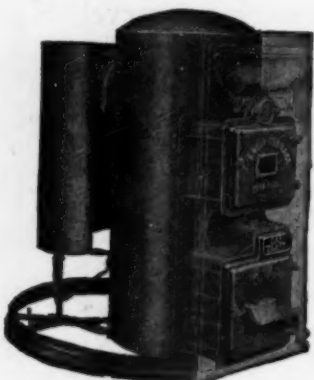
For Instance: From what other source can the Western Dealer obtain such complete selection of modern Warm Air Heaters as the Nesbit; Weir and Stanco Furnaces, 9 styles, and 47 sizes, in all.

Nesbit Moist Heat Furnace



Where else can you send an order for all of the following national brands and be assured of having your order filled complete?

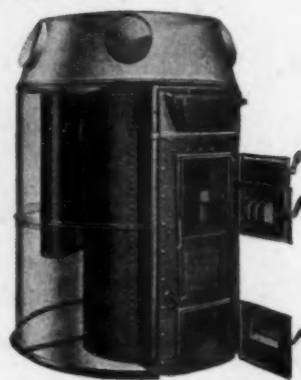
HANDY PIPE AND FITTINGS
"NO STREAK" REGISTERS
H & C—170-190 SERIES REGISTERS
STANCO REGISTERS
WISS SNIPS
PEXTO TOOLS
MAJESTIC CHUTES AND REGISTERS



WEIR STEEL FURNACE

Also the staple lines such as steel and semi steel Registers; Wood Grille; Whitney Tools; Asbestos Paper and Paste, etc., etc.

In fact we have everything for the Furnace-man.



STANCO STEEL FURNACE

STANDARD FURNACE & SUPPLY CO.

OMAHA, NEBR.



Some Signs Can't Be Seen!

EVERY day somebody walks into an open manhole marked "Danger," or does something else just as foolish. Of course they are sadder and wiser, but that fails to help broken bones.

When a business begins to slip because somebody failed to see the signs, it usually ends at the bottom and stays there. The familiar plaint—if we had only done so and so—is a poor substitute for real action at the proper time.

There is a tremendous change taking place in the warm air industry **NOW**. Have you noticed it?

It took the oil burner to prove conclusively the necessity and advantages of the steel furnace both for oil and other fuels. The trend is toward steel.

You may have failed to notice this important change in consumer demand—but don't ignore it—you should be selling steel furnaces **NOW**!

For 28 years, the "AFCO" Boiler Plate Furnace has led the field and naturally it is still years ahead. You can obtain full details without obligation. Better do it today. American Furnace Co., St. Louis, Mo.



Every Owner of an "AFCO" Furnace
is a *Booster*.

Other Furnaces Come and Go, but "AFCO" Stays and Grows

KRUSE steel furnaces are built of materials that endure—Keystone copper steel sheets, flange steel heads, copper bearing steel boiler tubes, stove castings—*for oil and coal.*

KRUSE CO., Indianapolis

BRILLION FURNACES

Notice the construction of these furnaces—weight where weight belongs.

BRILLION Furnaces are made good and make good on every installation because they are built to withstand long, hard service. They are made of highest quality material and correctly designed for volume heating.

And the Price Will Surprise You.

We make nothing but high quality furnaces, and yet our prices are lower because of our low overhead and sales policy, which eliminates everything but the high quality furnaces which you want.

Write today—
just send the coupon



BRILLION FURNACE CO.
200-300 Park Ave., Brillion, Wis.

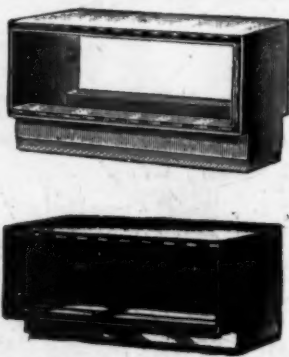
Send me full details and catalog No. 60

Name

Address

THE J. M. & L. A.
OSBORNE CO
CLEVELAND, O.

Buffalo Warehouse 64-68 Rapin Street



We Carry a Full and Complete Line of

**Perfection Double Wall
Pipe & Fittings**

A Full Joint of Perfection Pipe is 24 in. long, exclusive of Lap, and the Short Joints 2½, 4, 7½, 9, 11½, 14 and 19 inches.

"Everything used in Sheet Metal Work"

**REPAIRS
for
STOVES
FURNACES
and
BOILERS**

**Send for these
illustrated
order blanks
today~**

*We have the largest and
most complete stock of ~*

**STOVE, FURNACE & BOILER REPAIRS
NORTHWESTERN STOVE REPAIR CO.
CHICAGO - ILLINOIS**

**"American Seal"
FURNACE CEMENT**

**Roof Cement — Stove Putty
Plumbers Putty**

PAINTS and SPECIALTIES

**WILLIAM CONNORS PAINT MFG. CO.
TROY**

Established 1852

NEW YORK

JAMES L. PERKINS

Western Distributor

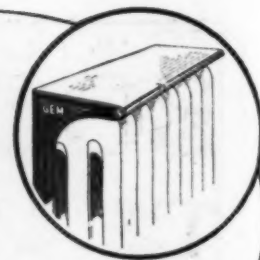
140 S. Dearborn St., Chicago, Ill.

"GEM"

Adjustable

RADIATOR SHIELDS

Every "Gem" Radiator Shield you sell lightens some customer's house cleaning labor and expense. *That's why they sell.*



8 popular sizes, gold-bronze or aluminum finish. Adjustable to radiator top widths, 6" to 13"; lengths, 11" to 65". Retail at \$4 to \$7. BEH & CO., Inc., 1140 Broadway, New York, N. Y.

**BEH
&
CO**

Buy from your jobber

MEYERS DOUBLE DUTY HEATER AND COMBUSTION CHAMBER

Fig. 1 shows combined fuel saving unit with burner in place. Arrows indicate volume of heated gases at top of fuel saver and small amount escaping into chimney.

Fig. 2 shows air flowing in at the bottom and up around the furnace and tubes to rooms above.

IF THEY DON'T BUY IT, THEY PAY FOR IT, ANYWAY!
We get every heat unit and put it to work... People can burn oil now cheaper than coal... We have a real money-maker for you, Mr. Dealer... Heat TWO apartments for the cost of ONE.

MEYERS FUEL SAVER CO., Inc. Janesville, Wis.

BOLTS

WE MANUFACTURE A COMPLETE LINE OF BOLT PRODUCTS, INCLUDING STOVE BOLTS, CARRIAGE BOLTS, MACHINE BOLTS, LAG BOLTS, NUTS, COTTER PINS, ETC. ALSO STOVE RODS, SMALL RIVETS AND HINGE PINS. CATALOG ON REQUEST.

**THE LAMSON & SESSIONS CO.
THE KIRK-LATTY CO.**
1971 W. 85th St. Cleveland, O.

PATTERNS FOR STOVES AND HEATERS
THE CLEVELAND CASTINGS PATTERN COMPANY
CLEVELAND, OHIO

PATTERNS
FOR STOVES AND HEATERS
VEDDER PATTERN WORKS
FIRST-CLASS IN WOOD and IRON
ESTABLISHED 1835 TROY, N. Y.

**IRON AND WOOD
STOVE PATTERNS**
QUINCY PATTERN COMPANY
QUINCY, ILLINOIS

Read the Wants and Sales Pages

BOOMER

THIS is our latest addition to the Boomer line. We heartily recommend it for your favorable consideration.

The severe tests we have given this furnace have proven its durability. The unsolicited reports we received from users last winter have been most flattering.

For durability, economy, easy to operate, easy to set up and the low price at which we offer this furnace, you will make no mistake in arranging for the agency.

THE HESS-SNYDER CO.
MASSILLON, OHIO

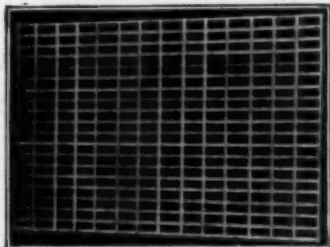
Makers of BOOMER FURNACES for Forty-Three Years



Eaglesfield EXTRA HIGH GRADE WOOD FACES

MADE by special machinery. Finest white quartered oak and High Speed Ball Bearing mechanism insures perfect construction. Specially designed grooving saw cuts all grooves exact size. Eaglesfield Wood Faces are stronger than others—the cross pieces are 1/16 inch deeper than those used in other faces.

Single orders or carloads promptly at fair prices. Write today.



EAGLESFIELD VENTILATOR CO.
915 DORMAN STREET INDIANAPOLIS, IND.

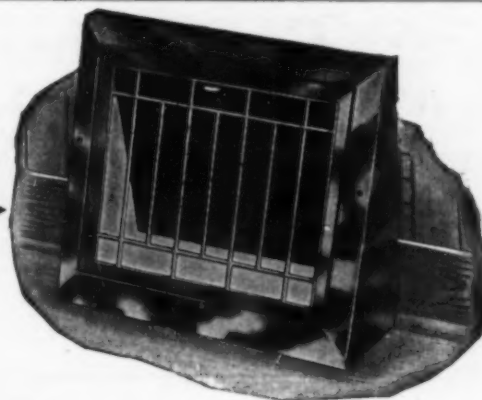


High Grade
Finely Finished
STOVE TRIMMINGS
Original, distinctive designs

IF YOU want superior quality and real service at prices that can't be beat—
SEE US NOW

THE FANNER MFG. CO.
Brookside Park CLEVELAND, OHIO

WRITE
FOR
OUR
CATALOG



Yes, we admit

it's Attractive.
it's Efficient
it's Economical
it's the Vol-Yum register

for volume Furnacework
for volume Profits.

Mail coupon today for interesting prices and information.

Rock Island Register Co.,
Rock Island, Ill.

YOU may send your interesting prices and information on Vol-Yum registers.

Name
Street No.
City and State

Founded 1880

Published to Promote
Better
Warm Air Heating
and
Sheet Metal Work

American Artisan and Hardware Record Sheet Metal Work-Warm Air Heating

Yearly Subscription
Price:
United States.....\$2.00
Canada.....\$3.00
Foreign.....\$4.00

Published EVERY SATURDAY at 620 South Michigan Avenue, Chicago

ADVERTISING AND EDITORIAL STAFF

Etta Cohn
J. F. Johnson

Franklin Butler
Chas. E. Kennedy

G. J. Duerr
Frank McElwain

Eastern Representatives: M. M. Dwinell, J. S. Lovingham, 156 Fifth Avenue, New York City

Vol. 94, No. 13

CHICAGO, SEPTEMBER 24, 1927.

\$2.00 Per Year

Table of Contents

	Page		Page
Sheet Metal Department.....	147 to 154	Industries	155
Four Seasons Road House Employs Sheet Steel for Better Decorative Effects, by George J. Duerr	147	Capitalizing on an 8 to 1 Advantage in Selling	155
Developing Pattern for Ornamental Lamp and Fixture, by O. W. Kothe, Principal St. Louis Technical Institute	150	Random Notes and Sketches, by Sidney Arnold	156
Credit Men's Association Reducing Fraudu- lent Bankruptcy	151	Warm Air Heating and Ventilating Depart- ment	157 to 164
Managing Men Efficiently Involves Several Basic Principles	152	Wall Stacks' Areas 70% of Leader Area— Extra Capacity for Long Pipes, by L. W. Millis	157
The Editor's Conning Tower.....	155	Chicago Furnace Installer Gets Call from Coop. Ad. 3 Hours After It Appeared....	159
Educating the Public as It Is Done by Other		Coming Conventions	164
		Markets	166

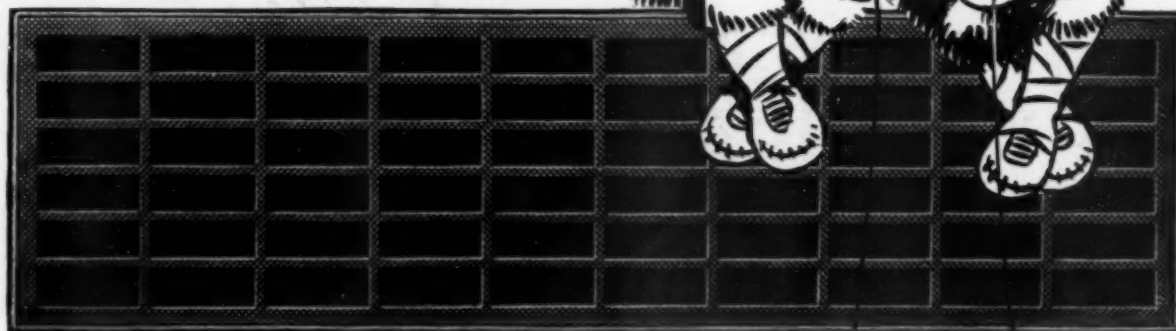
Unsell Yourself That Business Is Bad

Elbert Hubbard used to tell the story of a naturalist who divided an aquarium with a glass partition, putting a bass in one end and minnows in the other. Every time a minnow approached the glass partition, the bass struck. But after three days of bruising his nose, he gave it up and merely took the food that was given to him. Though the naturalist removed the glass partition and the minnows swam around him, the bass paid no attention to them, because he had been sold on the idea that business was bad. Occasionally we hear of salesmen who need to try another strike. As a matter of fact, the partition has been removed for some time. There are orders on all sides for those who go after them.

When it comes to Cold Air Faces—



Style C "Cobble" Cold Air Face



As a dealer you should be vastly interested in knowing what Style C "Cobble" Cold Air Faces offer to the man who installs them. For satisfaction to him in what you sell is satisfaction to you. It means a customer who will come back.

Briefly, the reason why "Cobble" Cold Air Faces are constantly gaining wider popularity is because they are economical. "Cobble" Cold Air Faces cost no more than stamped faces. "Cobble" Faces are *cast*, therefore, stronger. The rolled edge and narrow rim save the labor cost of recessing floors—to say nothing of the saving in time. Tiny "Cobbles" cover entire face. They preserve the finish indefinitely and are as slip-proof as a new non-skid tire. In every way "Cobble" Cold Air Faces save and satisfy. Consequently, they sell easier.

Do a little fishing on your own hook. Mail the coupon for list of prices and sizes.

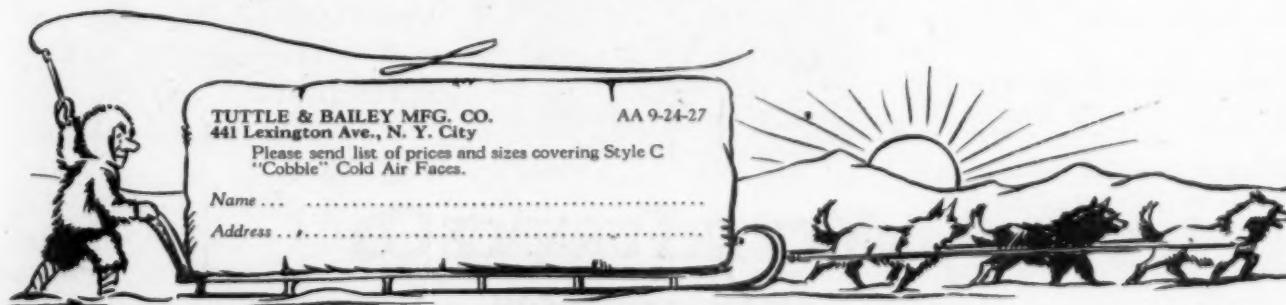


TUTTLE & BAILEY MFG CO.

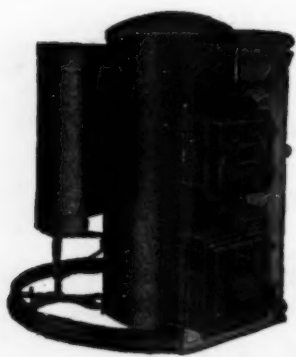
Established 1846

441 Lexington Avenue

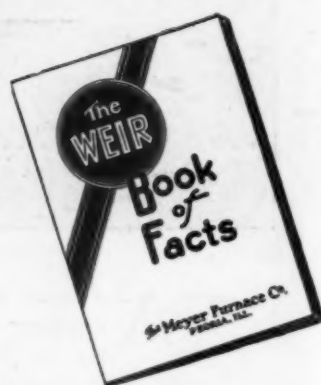
New York City



Say you saw it in AMERICAN ARTISAN—Thank you!



IF you were given the opportunity of becoming a partner in a business that you know is a leader in its industry—that you know makes an exceptionally high quality article and that you know has been highly successful for over forty-five years—
Would you be interested?



YOU surely would—you'd realize that your capital would be invested in a sound, substantial company with a fine record of past accomplishments and a splendid future by reason of its consistent progressiveness.

In a sense you are being offered such a partnership when you are asked to consider the Weir agency.

Weir furnaces are sold only through dealers—therefore *our success depends on yours.*

All the things that go to make our success also help you to success.

Weir dealers therefore have enjoyed good business in the past and stand in a

preferred position to enjoy still greater business along with us.

When you are offered the opportunity to become a unit of this business isn't it much like becoming a stockholder in a very successful company?

That's why Weir wants only the type of dealer who sells WARM AIR HEATING—not just furnaces.

That's why Weir picks and is picked by the better class of warm air heating contractors.

We will be glad to send the Weir Book of Facts to you or if you prefer to have a representative call on you just pin the request to your letterhead.

Send your representative to call on me with FACTS about the WEIR Agency.

The MEYER FURNACE Co
Peoria, Illinois

When writing mention AMERICAN ARTISAN—Thank you!



American Artisan and Hardware Record



Vol. 94

CHICAGO, SEPTEMBER 24, 1927

No. 13



"Four Seasons Road House," Twenty Miles North of Chicago on the Waukegan Road, Showing Line of Sheet Metal Decorative Lamps Made and Erected by the Economy Sheet Metal Works

Four Seasons Road House Employs Sheet Steel for Better Decorative Effects

Chicago Sheet Metal Contractor Produces Artistic Triumph With 32 Sheet Steel Lamps

By GEORGE J. DUERR

PLACING the great American public a-wheel, as the advent of the automobile has so successfully done during the past decade or so, has been the direct cause for the springing up of an industry which has already practically abolished the picnic luncheon and has cut in very seriously upon the restaurant and hotel dining room service—I have in mind the newly inaugurated institution of the American road house, that calling which sprang from the roots of the lowly "hot dog" stand of the circus and which now bids fair to outrival its haughty sister, the country club.

With the ever increasing prevalence of hard roads in all directions, these road houses have had a mushroom like growth, and many of their owners are appealing to the

architects for designs of places of external beauty and attractiveness,



Left to Right—E. C. Deichman, the Son, and His Parents, Mr. and Mrs. Henry Deichman, Snapped at Recent Outing

knowing as they do full well that they must make their bid for patronage in this manner before they can prove that that patronage is deserved by the excellence of their cuisine.

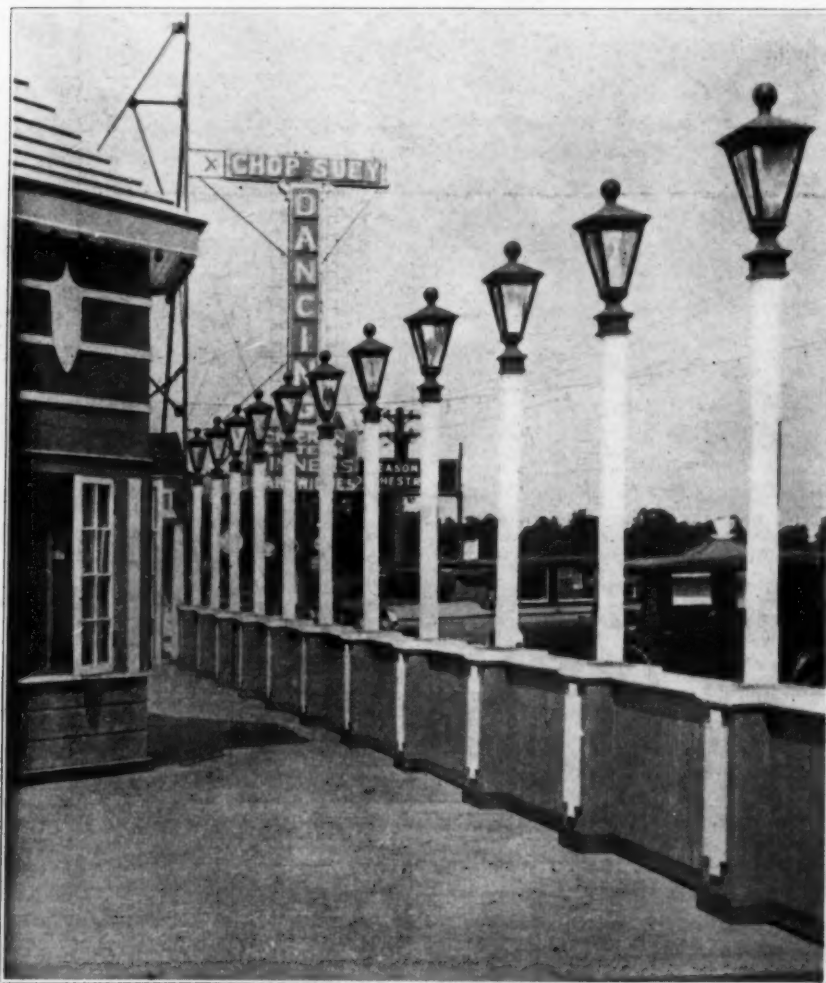
It is well known that in connection with these road houses there is almost always a dance floor, and in order to make this dance floor look as attractive as possible to the passing motorists, ornate lighting systems are being increasingly employed.

Henry Deichman, proprietor of the Economy Sheet Metal Works, 1927 Melrose Avenue, Chicago, is one sheet metal contractor in Chicago who has seen in this urge to beautify the American road house an opportunity for some excellent hand made sheet metal decorative

work.

This is exactly what was done in the case of the "Four Seasons Road House," located on the Waukegan Road about 21 miles north of Chicago. Here 32 hand made sheet metal decorative lamps, manufactured in the shop of the Economy Sheet Metal Works, of 26-gauge

feet in height and it sets upon the top of a pole about 10 or 12 feet from the ground. These poles with their decorative lamps encircle the entire dance pavilion and extend along the front of the road house proper. The lamps themselves are painted a deep greenish color and are dappled with a grayish tint,



Closeup of Decorative Lamps at Four Seasons Road House. Lamps Were Made of 26-Gauge Metal and Painted a Dark Green, Tinted with Gray

Armco iron, have been installed, as shown on the accompanying illustrations. Some idea of the amount of work and materials put into these lamps can be estimated when it is learned that each lamp consisted of more than 100 pieces. The balls at the tops of the lamps are the sole part not made by hand.

It was rather a difficult job to fashion them, as they had to be made so that colored glass could be fitted into their sides, shown on pattern reproduction herewith.

The lamp itself is about three

which makes them show up very well in the day time.

At night when they are all lighted, the colored glass in sides of the lamps makes a very brilliant effect, and the lamps pay for their cost many times over by increasing the popularity of the road house itself.

There was considerable work connected with getting these lamps to have the correct proportion for the height of the post which they were to decorate. A design was made in accordance with the speci-



Barbecue Equipped with Sheet Metal Roof and Ventilator

fications of the architects, E. J. Ohrenstein and Hild, 222 East Ontario Street, Chicago. But when the lamp itself was fashioned out of metal from the design and placed upon the post the anticipated and desired effect was not obtained, as so often happens. The lamp was found to be too short for the height of the pole, and the ball at the top was too large. So the design had to be altered sufficiently to correct the proportion, and how well Mr. Deichman succeeded in creating the desired effect can be judged by the finished product as it looks today.

But these lamps do not constitute the only use for sheet metal at the Four Seasons Road House. The dome on the main building is roofed with 26-gauge sheet steel, put on by Mr. Deichman, and the roof immediately below the dome is also protected from the elements by sheet steel products.

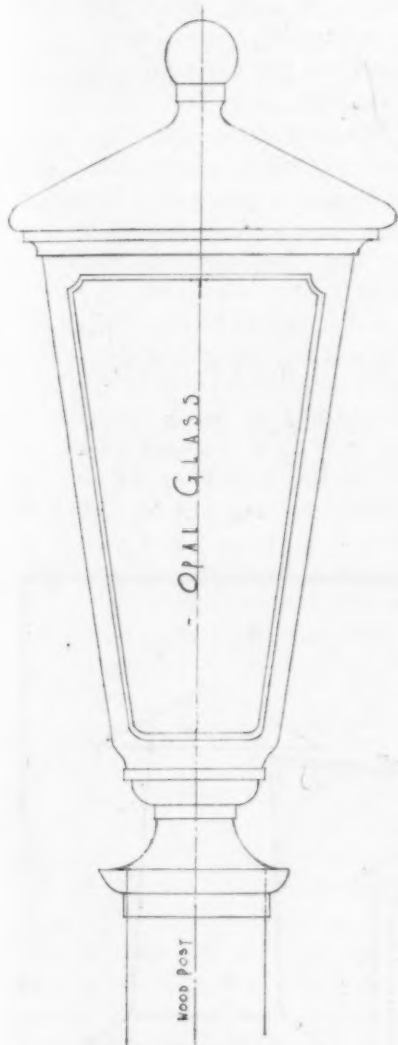
The barbecue house, which is



Dome of Main Building Covered with Sheet Metal Roof

just a short distance to the south of the main building, is also roofed with 26-gauge galvanized iron, and its kitchen is equipped with a galvanized iron ventilator.

The sign which hangs before the main building is made of blue enamelled sheet steel and is brilliantly lighted by night.



Pattern for Decorative Lamp for Four Seasons Road House, Showing How Glass Is Fitted into Sides

At night the decorative sheet metal lamps give the place that delightful holiday air so much sought after by the restless pleasure seeking public.

Mr. Deichman deserves a great deal of credit for this job, as the "Four Seasons Road House" is one of the show places in the realm of the road house among the hundreds which dot the vast network of paved highways radiating in all

directions from the city of Chicago.

Here is an instance where the sheet metal contractor, given an opportunity to show what he really can do, made not only a thing of beauty, but an object of permanence as well.

It must be said to Mr. Deichman's credit that the general contractor, the owner and the architects are well satisfied with the results obtained.

Here appears to be an opportunity for the sheet metal contractor to exercise his talents in the art of metal working to the full, and it is hoped that he will take full advantage of that opportunity.

Mr. Deichman, who has made his living from the sheet metal industry for the past 35 years and who consequently "knows his sheet metal," believes thoroughly and absolutely in the doctrine that a satisfied customer is the only kind of a customer the sheet metal man can afford to have. He uses no metal lighter than 26-gauge, as he knows that the lighter gauges will not stand up and the industry is only given a black eye when they are employed.

Mr. Deichman is rich in experience gained from his close daily contact with the sheet metal industry, and he is giving his son, E. C. Deichman, who works with him, the full benefit of his wide practical knowledge and experience.

D. M. Strickland, Armco Research Engineer, Describes Rust

Centuries ago the forerunners of present day chemists believed the universe was composed of earth, air, water, and fire. Today we know that fire is a chemical change, that air is a mixture of nitrogen and oxygen, that water is a compound, and that earth is a veritable storehouse of soils and minerals. Still, these four ancient elements—fire, water, earth, and air—are closely related to the life of the metals we see all about us.

Fire is a chemical change. It takes place when some substance unites with oxygen. Here is where

air, which is one-fifth oxygen, comes in. If the union is so vigorous that a kindling temperature is reached, we call it fire.

But there are many other chemical changes which are just as costly as fire. Yet, these burn at so low a temperature that no flame is visible. Moreover, there is no warning to indicate that destruction is in progress.

The chemist will tell you that if an iron nail is heated to redness and plunged into a bottle of oxygen, the nail actually burns. That which remains when the fireworks are over is called oxide of iron—a combination of oxygen and iron.

Now think of the iron you know in these terms. Maybe it is roofing, guttering, downspouts, tanks, metal lath, or other of the host of modern conveniences made of this sturdy material. What happens when they fail? Oxygen from the surrounding air or water slowly but surely unites with the iron. Then rust appears.

So it is that the chief difference between rusting and burning is time—both are oxidation. You can feel and see the fire produced by rapid burning. But when metal rusts the process is too slow to be seen. Rust is the ash of this slow fire.

Here, then, is a costly chemical change that gnaws at every pound of iron that serves mankind. It causes the many untimely failures which we see everywhere. And water or chemicals do not quench "rust-fire" as they ordinarily do the fire that flames. Rather, they fan it, for these fluids are invariably present when rusting occurs.

Earth comes into our picture in the form of iron ore. For it carries in its vast bosom deposits of another oxide of iron, which is refined to iron and steel. But mother nature through the process of rusting endeavors to bring it back to iron ore again. If we slight the refining process in any way, impure iron or steel is the consequence of our neglect. Then, nature retaliates by speeding along the process described as "rust-fire."

Developing Pattern for Ornamental Lamp and Fixture

Drawing Shows How Sheet Metal Can Produce Real Artistic Designs

By O. W. KOTHE, Principal St. Louis Technical Institute

IN MANY places odd shaped lanterns are designed and ornamented with colored glass which gives a splendid effect, and it would seem that if more of the shops were alive we would see much more of this ornamental work.

In figure 1 we have a lantern placed on top of a pier or column to mark the entrance of gateways into homes or entrances into subdivisions and the like of that. It is of simple design having a small foot mould resting on a brick structure and the body is cut out to represent a house with windows.

A slanting roof is placed on the top and art glass is set in which

concludes the ornament. As far as the development goes it does not require much but at the right we show how to develop the square-miter for the foot mould.

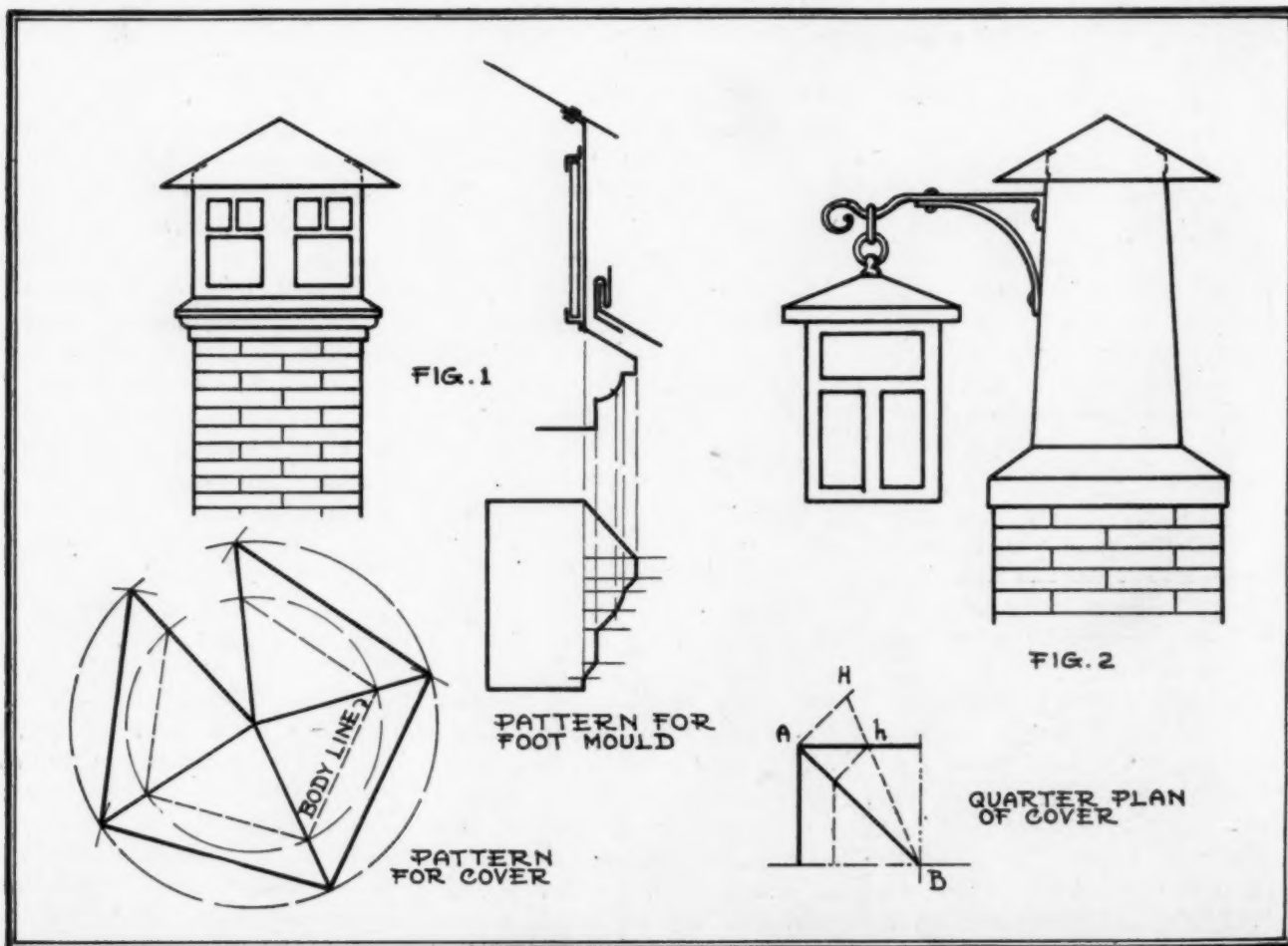
The detail of foot mould is first divided into any number of equal parts as far as quarter round is concerned and the girth for this is then measured off below, transferring each point and bend as shown.

Draw stretchout lines and then from each point in detail drop lines to intersect similar lines in pattern which establishes the intersections for tracing the miter line. All measuring for such work should be done along the wall line member, since

this is the point where the work must join other work and it must, therefore, be a starting place to work from.

As for making the glass rests, most any place or small off-set in the middle is sufficient to hold it in place, since it has no work to do and any cleat that is strong enough to support glass is sufficient.

A door should be provided on the one side for changing globes. The cover is developed similar to a pyramid where we use a quarter plan and develop a diagonal section on the hip line as A-H as the rise and H-B as the length of hip. This is taken with dividers and a circle is



Patterns for Sheet Metal Lanterns

described after which the full length of the side is measured off on the arc and lines drawn toward the center thus making the cover. If it is desired to place measuring lines for the body then this can also be inscribed as a dotted line at H in the plan for cover shows. Pick this length B-h, and using the center in pattern as radius, describe the circle. As they cross hip lines lines can be drawn and this gives the body lines for connecting the hood to the body of lantern. The body of lantern is nearly a straight piece of metal with holes cut out for windows.

Another design that is used for similar purposes and also to ornament fireplaces in clubs and gate

posts, etc., is shown at figure 2. Here the body is made square with a bracket projecting out with a sheet metal lantern having its sides filled with art glass.

These are all more or less ornamental fixtures and their designs can be changed as much as human nature varies. Most of such work does not require any difficult pattern drafting, but is more a matter of working out something artistic, something that appeals to the feelings of a person. That is really the hardest feature in all ornamental design work—it is not so much in its manufacture since we make the design and if it is made neatly it is well executed.

Credit Men's Association Reducing Fraudulent Bankruptcy

Convictions Mounting—Association Has 434 Indictments Pending

THE number of fraudulent bankruptcies reported throughout the country is steadily decreasing, according to the National Association of Credit Men, which is carrying on a nation-wide fight against commercial criminals.

J. H. Tregoe, executive manager of the association, said today that during the twelve-month period ending August 31, 1927, the credit protection department of the organization accepted for investigation 320 less fraud complaints than were reported in the corresponding period ending August 31, 1926.

From August 31, 1925, to August 31, 1926, the association accepted 936 complaints, he said, and from August 31, 1926, to August 31, 1927, the number of complaints dropped to 616.

"In spite of the fact that the number of cases reported has been decreasing," he said, "convictions have been mounting. During the 1925-1926 period mentioned, 120 commercial crooks were sent to prison through the work of the credit protection department, which runs down the crook, secures the

evidence necessary to convict, and prepares the case for a quick and successful trial. During the 1926-27 period, 161 crooks were convicted."

Mr. Tregoe attributes the decline in crooked failures in large measure to the deterrent effects of rigorous prosecution.

"The policing of business by fraud protection funds has had a remarkable effect in curbing the tendency of prospective commercial thieves," he said. "An organization operating not for profit is much better fitted to police and prosecute than the individual creditors. The crooks know that when caught they cannot settle or compromise.

"Of course, the large number of convictions reduces to some extent the floating supply of professional bankruptcy engineers. The successful crooked bust calls for the exercise of exceptional technical knowledge. Assuming that a business man has a crooked tendency or inclination, he may not be fitted for this kind of crime, and probably requires a specialist to aid him. Reducing the number of such individuals by conviction or indictment is a highly im-

portant factor in lessening fraud."

He said that at present the credit men's organization has 434 indictments pending against fraud suspects throughout the United States.

Vail Furnace Company Has New Adjustable Swing Chimney Top

The Vail Furnace Company, 1111 Broadway, Fort Wayne, Indiana, has produced a novel device known as Vail's adjustable swing chimney top.

This device is adjustable to any size chimney top that may be required between six and ten inches



The Adjustable Swing

in diameter. It is fashioned from cast iron and fits either the inside or outside of the chimney.

The accompanying illustration gives the reader a good idea of how this new device looks. For complete details and prices, however, write to the Vail Furnace Company, 1111 Broadway, Fort Wayne, Indiana.

W. J. Burton Company, Detroit, Adds Sheet Metal Department

The W. J. Burton Company, 5670 Federal Avenue, Detroit, Michigan, has recently installed a new department, devoted exclusively to the wholesaling and distribution of galvanized metalware, featuring the products of the Reeves Manufacturing Company, Dover, Ohio. In last week's issue it was reported that the new department would be devoted exclusively to the manufacture of galvanized sheet metalware, which was, of course, in error.

Managing Men Efficiently Involves Several Basic Principles

Desire of Employee for Status and Desire for Job Made Into Career Are Inherent

ALL workmen desire is wages; there is nothing else to the labor problem. How often do we hear these phrases in the everyday discussion of industrial problems. And yet, if a moment's thought is given to the problem, we can recall instances of two managers in the same vicinity paying exactly the same wages for the same type of work, one of whom has created a well satisfied organization and the other a restless, dissatisfied group of employees.

As a matter of fact, there are two aspects to the labor problem; one is the economic phase and the other is the administrative phase. The economic phase includes such matters as wages and may be regarded as peculiar to our present economic system, while the administrative phase is the permanent problem of organizing human nature and has nothing specific to do with any particular economic system. There is a great deal that is purely administrative which an employer must do in running a large plant. Such administrative problems are of almost exactly the same nature as those presented in any other non-economic organizations, such as the Red Cross and army organizations, which involve problems of leadership but do not involve any particular economic problems.

One of the main faults in administrative attitude, which is present in all leaders in any organization, is a tendency to be autocratic. There are elements in the personal make-up of forceful employers which have nothing to do with capitalism and which are the attributes of an administrative leader in any active organization. An outstanding trait is impatience with interference in control. There is a natural autocracy of leadership. Impatient to get re-

ing machines the response is automatic, but that from human beings sults, executives forget that in add-co-operation must be developed.

There are desires of the workman that are not strictly economic but which are found among subordinates working under any administrative system. These desires are the desire for justice, the desire for status, and the desire to have their jobs made into careers. The desire for justice is inherent in human beings. One of the primary sources of discontent in an organization is inequality in treatment between subordinates of the same or of different rank by the head of the organization.

In a mine in which the writer has personal contacts, where a very good *esprit de corps* exists, the following incident occurred:

The superintendent of one of the departments, a valuable but excitable man, was angry with a workman over a mistake that had occurred and in his excitement grasped the workman by the arm. The workman misunderstood, and a rough-and-tumble fight occurred. The manager suspended the superintendent, and, in spite of the willingness of the workman to drop the incident, insisted on a formal apology. The manager has been very punctilious about the observance of his policy of equal treatment to both men and subordinate officials for violation of discipline.

Besides justice, employees desire a certain recognition of their status as independent human beings, and it is for this purpose that managements have established employee representation. But employee representation is a temporary and insecure superstructure if not built on the foundation of the men on top being just and tactful managers and

superintendents. In some cases employee representation is heralded as a protection of the workman against the abuses of superintendents and other production officials.

This, it seems to me, is bad organization except as an emergency step. Employee representation should be a vehicle which officials should use in making their management more effective and more democratic, but should not be considered as a mechanism for holding the officials composing the management in check.

The Element of Leadership

The one thing to be emphasized in any discussion of the administration of business enterprises is the element of leadership. Modern leadership must, however, be different from old-fashioned leadership in mitigating its traditional autocratic tone. There is a growing recognition on the part of those in positions of authority and of responsibility that they can obtain better results by enlisting the cooperation of those that they lead rather than by insisting upon their own infallibility.

Finally we come to the necessity of making the job a career for the employee. Workmen are not different from men in other branches of life. If they are energetic they desire above all things a successful career. It is true there is only a small fraction of workers that desire increased responsibilities, but this fraction must be given opportunity for advancement.

Need for an Adequate Industrial Relations Department

However, you cannot have justice, you cannot have the job made a career, you cannot have status unless there is an adequate employment and industrial relations department. Such a department acts as

the eyes, ears, memory; as the heart, hands and brain of the management in handling its personnel. In a plant of any size a carefully worked out card system is necessary to take the place of individual memory.

By means of this department the manager can, vicariously, speak to and shake the hands of his employees, mete out justice and discipline, and generally control his entire organization. It provides a means for the scientific hiring of men and for making certain that the applicant is given a courteous hearing and that the newcomer is properly inducted and made to feel at home in his new job. A properly organized employment department is probably one of the most important of modern innovations in making for better relations between employers and employees. It is the starting point, but a very important starting point. There are, of course, many other things that are necessary to properly organize a modern establishment.

No mechanical method can serve as a panacea, but the more one sees of the practical matters in the leadership of an industry, the more one is impressed with the importance of what is generally included under the title of personnel administration. One cannot, for example, make an employee's job his career if the employee has not been properly selected when he comes to the firm. Thus an intelligent, progressive and, if possible, scientific procedure of se-

lection is a first essential. A proper training system then becomes indispensable. The boy who enters industry must be carefully trained for future openings so that if he is sufficiently capable and energetic, his lack of preparation may not debar him from advancement. This is a progressive and continuous responsibility of management that involves the setting up of a comprehensive educational program.

One could carry out this line of thought through a whole chain of activities. If the worker's career is not to be cut short by physical causes, the employer must interest himself in the health and safety of the worker. In order that his progress in the firm will not be cut short by discharge through the petulance of a foreman or retarded through unfair promotions, there arises a need for the development of modern foremanship to replace the browbeating type.

Humanics and Organization

Any employer who attempts to eradicate dissatisfaction from his plant soon finds that his human problems are bound up with every phase of his organization problems. The main prescription is that time and attention be devoted to the problems of human organization. The real difficulty of labor relations has been one of neglect. Executives have treated the question of human organization as a minor matter, not as a major problem. They have too often failed to realize that their re-

sponsibilities as assemblers and organizers of man-power are just as great as those in mechanical and financial matters.

H. T. Prichard Offers Suggestions on O. W. Kothe Patterns

TO AMERICAN ARTISAN:

Turn to page 22 of the September 3rd issue of AMERICAN ARTISAN. Here O. W. Kothe shows a method of making a pattern for a roof jack that sets on the hip of the roof.

I have not taken the time to follow Mr. Kothe's drawing through, because I always find them correct. In his method of assembly he shows the seam on the under side of the plate and soldered. In my estimation it should be on the inside of the taper and not soldered. I find that when they are soldered and used for smoke pipes as used in rural districts, the solder melts and consequently they leak. If the seam is arranged as I arrange them, they need not be soldered and will not leak. Trusting that no offense will be felt at my correction, I am

H. T. PRICHARD.

Mr. Prichard is the proprietor of the Prichard Sheet Metal Works, 308 Eighth Street, Hoquiam, Washington.

Rhodes Appoints Committees For Michigan Sheet Metal Association

Harry Rhodes, President of the Michigan Sheet Metal and Roofing Contractors' Association, has appointed his committees for the forthcoming year's work with the following statement:

"It takes more than a president to make a success of any association. To put things over in a big way every member must do his bit. The following are my appointments of the standing committees for the year:

Nominating

H. F. Cox.....Grand Rapids
G. E. Fitzgerald.....Battle Creek
John Bos.....Muskegon

Legislation

I. Lammers.....Grand Rapids

A Message to the Younger Sheet Metal Men

Every school boy has heard of the story of Hans of Holland, the little boy who stuck his finger into the leak in the dyke and thus prevented the water from wearing a larger hole and flooding his country. This small timely service by a small boy saved his country and its people.

The young men or apprentices in the sheet metal industry are to be given a chance to render a service to their industry and to the country equal to that of Hans of Holland.

In the issue of October 1st there will be published the particulars about an offer to be made by the Sheet Steel Trade Extension Committee for the first fifty specimen sheets having on their surfaces at least one unbroken paint blister. The object of the Sheet Steel Trade Extension Committee is to get a group of specimen sheets having paint blisters on them which their chemists can analyze with the view to determining why these blisters occur. The message will be directed to the younger men of the industry and it is hoped that they will take the matter seriously.

H. R. Paulson.....Lansing
Guy Fellows.....Jackson

Program

A. Muelenberg.....Kalamazoo
Wm. Dunbar.....Kalamazoo
H. F. Brundage.....Kalamazoo

Sergeant-at-Arms

Jay Sikkenga.....Kalamazoo

Resolutions

E. E. Karrer.....Flint
C. Church.....Battle Creek
J. J. Sweet.....Grand Rapids

Auditing

A. Berschbach, Sr.....Detroit
D. Lamoreaux.....Grand Rapids
H. F. Brundage.....Kalamazoo

Membership

R. J. Weiss.....Saginaw
R. M. Reichenbach.....Bay City
A. Reis.....Detroit

Place of Meeting

A. B. Lewless.....Saginaw
W. C. Lusk.....Battle Creek
H. B. Murphy.....Chelsea

"I know every one of the above appointees will do his bit, thereby making this year and our coming state convention a grand success.

"HARRY RHODES."

Milcor Has New Metal Lath Shear on Purchase or Rental Basis

Specially designed shears to be used in cutting Milcor Stay-Rib No. 3 metal lath have been placed on the market by the Milwaukee Corrugating Company.

The blades of the shears are mounted on a 12 by 40-inch base



The Shear in Use

made of cast iron, cast in one piece. The entire machine weighs 400 pounds and may be placed on skids or trucks for convenience in moving.

The lower blade of the shears is made of a single piece of hardened steel, and is securely bolted to the cast iron base. The blade is 27 inches long, and has five solid $\frac{3}{4}$ -inch ribs spaced 6 inches apart.

The upper, or moving, blade is made in three sections, each 9 inches long; it is made this way so that it can be easily removed for sharpening. These sections are made of hardened steel, and are strongly bolted to a movable bar which is operated by a handle 46 inches long. This long handle gives sufficient leverage to enable one man to work the machine.

The cutting surface is the same width as the lath. A sheet of Milcor Stay-Rib No. 3 Concrete Reinforcing Metal Lath is placed in the machine and measured off for the desired length; then the handle is pulled, and a straight, uniform edge will be cut the entire width of the sheet.

The shears, which are designed to cut Milcor $\frac{3}{4}$ -inch Stay-Rib Metal Lath No. 3 only, may be rented or purchased at reasonable cost. Details of the rental and purchase plans may be secured by writing to the Milwaukee Corrugating Company, Milwaukee, Wisconsin.

Detroit Sheet Metal Boys View Movies of Slate Trip

The Detroit Sheet Metal and Roofing Contractors' Association opened their 1927-1928 regular monthly meetings at the Book-Cadillac Hotel Tuesday evening, September 13th.

The usual dinner was enjoyed, followed by community singing led by Bill Amelung. During the singing a real harmonious trio was discovered. It consisted of George Mars, Blake Wright and Joe Witstock. They went so good that they will hereafter be a part of the regular musical program.

Moving pictures of the slate trip provided the real meat of the program. The lecture given by Bill Busch was intensely interesting. "These pictures were taken by the boys on the trip and it is quite surprising to find that they were not upside down," said Frank Ederle. The four reels show the production of slate very clearly. Following the pictures a general discussion was held which gave the finishing touch to a wonderful opening meeting.

Delaware & Hudson to Use Welded Metal Road Ties

So successful have been its tests in the use of metal railroad ties, constructed by welding from worn rails, that the Delaware & Hudson railroad has decided to substitute metal for wooden ties in its yards and sidings, and to install equipment in its shops for the construction of the ties. A number of sample ties were installed about one year ago in its Glenville yards.

Commenting, H. S. Clarke, engineer of maintenance of way, declared that these metal ties are not only many times as strong as the ordinary wooden type, but can be made at a low cost.



Rubber Horse Shoes

From Wade's Drug Store, Fairbury, Illinois.

Please advise where we can obtain rubber horse shoes, regulation size, for indoor pitching with a metal wire running through them.

Ans.—Wolverine Supply and Manufacturing Company, 1200 Western Avenue, Pittsburgh, Pennsylvania.

Hoffman Water Heater

From Peter Born, 112 Washington Street, Hoboken, New Jersey.

Please advise me who manufactures the Hoffman Water Heater.

Ans.—Hoffman Heater Company, Louisville, Kentucky.

The Editor's Conning Tower

Educating the Public as It Is Done by Other Industries

MEN in the warm air heating industry, if there are any, who are skeptical or doubtful of the results to be obtained shortly from the advertising that is being done by the National Warm Air Heating and Ventilating Association can be very easily lulled back into a sense of security on that score by a perusal of the record-breaking increase in business enjoyed by the makers of Timken Roller Bearing equipped machinery of all kinds, due to the advertising carried on by the Timken Roller Bearing Company.

As almost everyone knows, the Timken Roller Bearing Company does in no instance sell its products to the public direct. These bearings are purchased by manufacturers of machinery of all kinds with which to equip their machines.

Under these circumstances, therefore, it would seem logical for the company to advertise in mediums reaching the manufacturers of machinery only, disregarding the public entirely. Such is not the case, however, as the advertising schedule of that company calls for over 3,000 individual full-page insertions, representing a yearly circulation of approximately 200,000,000 impressions. So extensive is the advertising campaign of the company direct to the public that the company ads appear even in the college and university papers, where students who a few years hence will be going into industry are made fully acquainted with these products. And yet the company receives not one dollar direct from the public.

The attitude of this company represents faith in advertising. The officials of the company realize that in order to sell more of its own products it must make it possible for manufacturers of machinery to sell more of their machines equipped with these bearings.

Is the faith of this company misplaced? Decidedly not. For analysis shows that the average business placed by customers of the Timken Roller Bearing Company during 1926 enjoyed an increase of 91 per cent over that placed in 1925. And for the first half of 1927 the average will show an almost 100 per cent increase over the total bearing business placed by these customers during the whole year of 1926.

Here is proof positive that advertising, when properly done, does pay and pay handsomely. The warm air furnace industry has a product fully equal in service merit to that just described. There is no reason why the warm air furnace industry could not increase the sale of its products by a percentage equal to that of the bearing people.

It is also to be regretted that the manufacturers of sheet metal products have not yet recognized the advisa-

bility of doing some of the missionary work necessary to acquaint the public with the merits of sheet metal. It is true that such organizations as the Sheet Steel Trade Extension Committee, the Copper & Brass Research Association and the American Zinc Institute are doing a great deal of work along this line, but there are still further possibilities. So far the National Association of Sheet Metal Contractors has done nothing along this line, and they could do a great deal if they would just put their shoulders to the wheel. The point is that the membership of these organizations must awaken to the fact that the public must be taught the merits of certain products. That is the only way that they can be brought to ask for those products when building.

Capitalizing on An 8 to 1 Advantage in Selling

ONE of the speakers at the furnace fan school held at the Hotel Eitel, Chicago, last week by the Warm Air Furnace Fan Company stated that the best way to get business is to see all of the people who are logical prospects for your products and the law of averages takes care of the business end of the business. This young man illustrated his point with a very homely yarn, which unfortunately I am not permitted to reproduce, but which drove his point home to everyone in attendance.

The company which this salesman represents is very successful in merchandising its products, and there is every reason to believe that this company employs the principle of seeing all the people who are logical prospects for a warm air furnace, not only once, but a half dozen times. Sooner or later they buy.

This young man also spoke of the 8 to 1 ratio existing between the warm air heating system and the hot water or steam. By the 8 to 1 ratio he meant that the warm air heating system has eight fundamental sales points where the other two competitive systems have only one.

Think of it! Selling a line where the advantages are 8 to 1 in favor of the warm air furnace over its competitors must seem a "pipe" to the salesmen of other lines.

The trouble with a lot of warm air furnace men is that they do not go about their merchandising problems in the right manner. They want to sell castings instead of selling as they ought to "conditioned air." And in the process of selling castings they bring the warm air heating system down to a par with the hot water and steam system.

The warm air heating system actually has an advantage equal to 8 to 1 over the competitive systems. Therefore, why not capitalize on this fact?

Random Notes and Sketches

By Sidney Arnold

"The essence of humor is sensibility; warm, tender fellow-feeling with all forms of existence."—Carlyle.

I had the pleasure of a visit from R. C. Walker, manager of the Meyer Furnace Company, Peoria, Illinois, who came into town on Wednesday of this week to attend the Midland Club meeting at the Congress Hotel. Mr. and Mrs. Walker, he informed me, had just returned from an extended vacation trip which took them by motor over 6,500 miles of the scenic Pacific coast and Rocky mountain routes. Their wanderings included Colorado, California, Oregon, Washington, Yellowstone Park, Utah and many other states. Needless to say that Mr. Walker was very enthusiastic about what they had seen. He is looking fine.

* * *

While walking along Michigan Boulevard, Chicago, on Wednesday of this week I had the pleasure of meeting V. L. Roland, of Elkhart, Indiana. Mr. Roland did not come to the city to see the big fight, but on business, and was returning home that same day. He certainly looked as though Dame Nature were smiling upon him, and I am happy to say that he has lost all trace of the serious illness he passed through early in the year.

* * *

L. W. Millis, secretary and treasurer of the Security Stove & Manufacturing Company, Kansas City, Missouri, found himself in a rather peculiar predicament on Wednesday of this week. You see, Mr. Millis is the president of the Midland Club, a group of warm air furnace manufacturers. Upon settling down to business again after the summer vacations were over, Mr. Millis determined that it was about time for the Midland Club to have a meeting. He thereupon sent out notices to the members of the club that a meeting would be held in Chicago on Wednesday, September 21. Now it so happens there was a big fracas

scheduled in Chicago for the day following the day of the Midland Club meeting—something about two gentlemen of the pugilistic world contending for a crown of some kind or other. It appears that a lot of furnace manufacturers had been wracking their brains excitedly for an excuse to get to Chicago on September 22, and just when they were about to give it up as one of those insoluble riddles, along comes Mr. Millis' invitation to attend the Midland Club meeting in Chicago on the day just before the big fight. I'll warrant that no invitation to attend a meeting in Chicago was more closely scanned for its date than the one sent out by either Mr. Millis or Mr. Williams on this occasion. Mr. Millis, always very popular and sought after at all the meetings he attends, could not quite understand why he was being dined and entertained in the manner that he was during the Midland meeting in Chicago.

* * *

I had the extreme pleasure, on last Saturday afternoon on my way home, of meeting my friend Jack Barclay, who is now traveling for the Charles Johnson Company, Peoria, Illinois. Jack had just alighted from a train from Milwaukee and was hurrying into a hat store, where he expected to discard the old straw. He was certainly looking fine, and I enjoyed seeing him very much.

* * *

As Usual

Here's one of the real reasons why Les Taylor of the International Heater Company did not join the merry Legionnaires on their return trip to the battle of Paris:

It was a stunning creation—an exquisite product of the couturier's artistry in chartreuse moiré, of a bewitching bouffancy of silhouette; and as the enthusiastic modiste with

her own trembling fingers draped it about her shopper's lovely figure, the young lady found the dinner gown compelling, well-nigh irresistible. But when Madame had delicately conveyed an intimation as to the price, she was forced to the regretful conclusion that it was more than she could afford.

Mrs. Taylor was positively enchanting the first time she wore the dinner gown.

* * *

Clif J. Niehaus, Cincinnati, called us on the telephone about 11:30 a. m. Friday morning and his voice sounded as though he had just had his breakfast. I know Clif was at the fight on Thursday night, and I have a pretty good hunch as to who he had his money on. I know this because while listening on the radio, I heard Clif's voice come booming out of one of the \$5 or perhaps \$10 seats demanding that Dempsey take the vaseline off his face. Immediately thereafter the radio announcer said that there was much activity on the part of the Dempsey attendants while the ex-champion sat in his corner.

* * *

"A man died and left his estate to three friends, subject to one condition, namely, that in his coffin each legatee put \$100 as a remembrance.

"Well, the first legatee to put in his money was an Englishman, and he put in a crisp \$100 bill. The second legatee, an Irishman, put in a crisp \$100 bill also. The third legatee, a Scotchman, took out the two banknotes and put his check for \$300 in their place.

"The Scotchman was surprised the next day to learn that his check had been cashed. He had forgotten the undertaker was a Connecticut Yankee."

* * *

Quite All Right

"Sir, I desire to be excused from jury duty."

"Why?" asked the judge.

"Because I can only hear with one ear."

"Oh, you'll do," replied the judge. "We only hear one side of a case at a time."—M. I. T. "Voo Doo."

Wall Stacks' Areas 70% of Leader Area— Extra Capacity for Long Pipes*

By L. W. MILLIS

THE Standard Code gives the ratio of stack area to basement pipe area as 70 per cent (of the basement pipe area).

In other words, the area of a wall stack should be 30 per cent less than the area of the basement pipe to which it is connected.

The connection between basement pipe and bottom of stack should be made with as easy a bend as circumstances will permit, and should be the full area of the stack. Under no circumstances should the pipe be oveled and stuck into the bottom of the stack.

basement pipes, "Sharp turns and long pipes should have extra capacity." In the absence of definite information in the Code, we must rely on our own information and experience concerning additional capacity or area.

Note 8, Sheet 6, assumes 10 to 12 feet as the limit in length without additional size (area). It would be difficult to make a table giving exact increase in capacity because the increase is not at a uniform rate. It increases more as the distance increases. Also the rate is not quite as great for second floor pipes as for first floor pipes.

However, the increases must, for practical purposes, fall within commercial sizes and, therefore, exactness in the table is not essential.

Table No. 7 can, I am sure, be relied upon to insure capacity of basement pipe where additional elbows or extra long pipes, or both must be used. It is assumed that the run of pipe is 12 feet long, and already contains one angle and one elbow. If the run is to a second floor, the stack must be increased to maintain the 70 per cent ratio as provided in Sheet No. 9. If there is a run-over beyond top of stack, the length of runover should be counted as "length of run," and the size of the run calculated as though the stack was at the far end of the runover.

To use Table No. 7, pick out the

Table No. 6
Equivalent commercial sizes

Diameter basement pipe	Sq. in. area basement pipe	Wall stack area required to equal 70%	Single wall stacks	Double wall stacks with outside dimensions	Size of carry-over
8"	50	35	3 1/2 x 10	3 5/8 x 10 5/8	5 x 11
9"	63	43	3 1/2 x 12	3 5/8 x 13 5/8	5 1/2 x 14
			3 1/2 x 13	3 5/8 x 12 5/8	6 x 12
10"	78	55	5 x 12	5 5/8 x 12 5/8	6 x 14
12"	113	79	6 1/2 x 13	6 5/8 x 13 5/8	9 x 14

If the stack is smaller than 70 per cent, the room will be cooler than other rooms in the house to which proper sized pipes, or pipes and stacks, have been connected.

Much is lost under 70 per cent, but a little is gained by making the stack larger than 70 per cent of the basement pipe. The velocity of the air in the smaller stacks may be greater than in the larger stacks, but we should not be misled into assuming it is delivering more heat. The proportion (width and depth) of a stack affects its carrying capacity. A deep stack will deliver more air than a thin stack of same area.

Table No. 6 gives dimensions of round pipe, single wall stack and double wall stack with reference to a ratio of 70 per cent stack area to basement pipe area. It also gives approximate size of carry over.

Wherever six inch studding is available, it is well to use wide (nearer square) stacks. The ratio should, however, remain close to 70 per cent (or more) of the basement pipe area. It is often necessary to carry a pipe over some distance from the top of a stack. Such carry-overs should, as far as possible, approximate 10 per cent greater area than the basement pipe. Both ends of the carry-over should be beveled so dead ends will not retard air flow. If side wall register boxes are used at end of runovers, they should have the same throat area as is used in first floor boxes.

Data Sheet No. 10

Extra Long Basement Pipes and
Extra Elbows

The Standard Code (Note 8, Sheet No. 6) says concerning

Table No. 7

Sq. in. of area to be added to Standard Code size of basement pipe if pipe is over 12 ft. long, and already has one angle and one elbow.

Diameter of pipe in inches	Area of pipe in sq. in.	If 5' added length	If 10' added length	If one angle extra	If one elbow extra
8	50	4	8	5	10
9	63	5	10	6	12
10	78	6	12	7	14
12	113	9	17	10	20
14	154	12	24	13	26

*These are "Data Sheets" Nos. 9, 10, 11 and 12, by L. W. Millis of the Warm Air Study Club, The Security Stove & Manufacturing Company, Kansas City, Missouri, and comprise a series of articles designed to interpret the findings of the University of Illinois Research Staff on warm air heating in the language of the workmen. These articles will be published later in pamphlet.

additional square inches for each extra portion beyond one angle, twelve feet of pipe and one elbow. And add them to the area of the twelve foot pipe.

Example: An 8 inch pipe 22 feet long with one extra angle would require 8 square inches extra for the 10 extra feet and 5 square inches extra for the extra angle. The total area would then be $50 + 8 + 5 = 63$ inches. You should use a 9 inch pipe and if it is for a second floor the area of the stack should not be less than 70 per cent of 63 inches.

Too much stress cannot be laid upon the use of Table No. 7. Remember the air travels slower in the long pipes and also reaches the register at a lower temperature. Therefore, more air at the lower temperature must be delivered to the register.

Data Sheet No. 11

Registers

All makers of or dealers in registers supply information concerning their capacity. It is probable that most of such information is quite accurate. Nevertheless the furnace installer should know for himself that every register is connected to a register box in which the throat

pipe, the register will, of course, fail to deliver more air than the throat of the register box permits to pass.

Data Sheet No. 12

Return Air Ducts

The Standard Code provides for cold air supply from either the outside of the building or from the inside. It is more expensive to heat a house in which all the air is taken from the outside. Most of the dust in a well kept house is borne in by air from the outside.

If an excessive amount of air is brought in, there will be more dust to settle in the house. If only a limited amount of outside air is brought into the house by leakage around the doors and windows, there will be less dust in the house and at the same time sufficient change of air to keep it in a healthful condition, except where large numbers of persons are assembled.

For residence work, return air supply from within the house gives satisfactory results. In such a case the Code directs us to use a return duct having an area equal to the combined area of all the warm air pipes.

Return ducts should be as short

the duct there should be a slight pitch downward for the same reason that a warm air pipe should pitch upward. All abrupt turns should be avoided.

Try to think of a stream of air flowing downward as flowing like a rivulet of water. Think of the eddies at curves and rounded corners where the water flows over a dam. Think of the sluggish motion over a flat surface. In addition, think of the combinations of all these that can be made in a return duct. Ample air must be delivered (not sucked) to the bottom of the furnace. No more heat bearing air can leave the top of the furnace than enters the bottom of the casing.

Detroit Warm Air Heating Contractors to Meet September 27

A meeting of the Detroit Warm Air Heating Contractors will be held in the Northwestern Community House, Detroit, on Tuesday evening, September 27, at 7:30 o'clock. Representatives of any firm doing warm air heating work will be welcomed.

Be sure to attend because many important subjects will be discussed in which you are vitally interested.

Table No. 9

Pipe diameters, areas and register sizes

Diameter of pipe in inches	Area of pipe in sq. in.	Size of either side-wall or floor register	Floor Registers	
			Pipes larger than 14 inches have capacity as follows:	
8	50	8x10	Registers can be selected from catalogs of manufacturers.	
8	50	8x12	Care should be taken to ascertain the maker's capacity rating as they vary considerably	
9	63	9x12	Diameter of pipe in ins.	Area of pipe in sq. in.
10	78	10x12		
12	113	12x14	16	201
14	154	14x16	18	254

connecting to basement pipe gives the register an opportunity to deliver the quantity of air for which the register is designed.

A register may have a face with openings large enough to pass the air that a pipe eight inches in diameter brings to the box. Unless the throat, or bottom of the box is large enough to equal the area of an 8-inch

20	314
22	380
24	452
26	531
28	616
30	707
36	950

as is practical, but they should not drop down along side of the furnace casing. When it is necessary to use a pan to carry air to

John B. Reynolds Opens Hardware Store at Hartshorne, Okla.

John B. Reynolds, who recently returned with his family from Eugene, Oregon, has rented the building formerly occupied by the Princess Theater at Hartshorne, Oklahoma, and is having it fitted up for a hardware store. New shelving is being put in and it is being painted as the work proceeds. The front will be remodeled and new doors and windows placed at the rear. Mr. Reynolds expects to have his stock on the shelves and ready for business by October 1. He has had years of experience in this line of business here and thinks there is room here for the fourth hardware store.

Chicago Furnace Installer Gets Call from Coop. Ad. 3 Hours After It Appeared

Cooperative Advertising Campaign in Chicago Daily Paper Brings Good Results

THE better element in the warm air heating industry have realized for a long time now that if that industry is to be placed upon a higher plane than it now enjoys

the public must be educated into the new era in warm air heating.

Competitive heating systems have been able to thrive only because the warm air heating installation

has been abused. There is not one warm air furnace installer today who will refute that statement. And the warm air heating system has been abused because it has been looked upon as a cheap substitute for something beyond the price range of the prospective customer.

Such being the case, in order to dissipate the illusion under which the public is now laboring and refusing warm air heat, warm air furnace installers are taking the "bull by the horns" in their own way in their own communities and are educating the public into the real worth and merit of the warm air heating system.

The accompanying illustrations are reproductions of advertisements which are now being used in the *Chicago Herald and Examiner* each Friday morning by 11 Lennox furnace dealers, located in the Chicago and surrounding territory, in conjunction with the Lennox Furnace Company.

The idea which it is desired to convey with this campaign is that the warm air heating system is superior to all other systems of heating. It is desired to get the Standard Code before the public in such a way that they will understand that if their warm air heating system is not working properly it is because of faulty installation and that if it is installed in accordance with the code, they can expect not alone heat in their homes, but "air conditioning" and all that that implies as well, which is not possible with the steam or hot water system.

Of course, these men who have thus banded themselves together have not an unlimited amount of money to spend for the purpose of cooperative advertising; and so, naturally, they tried to select the day each week on which the adver-

Why Heat Your Home by GUESSWORK?



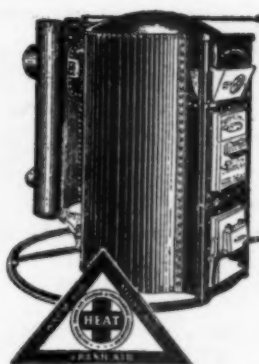
Modern science has made it possible for your heating system to fit your home as exactly as the glass fits the windows. Before deciding upon your heating system, call a Lennox Heating Engineer. He will measure your home by the "STANDARD CODE"—an authorized formula that computes the size of the Warm Air Heating System necessary to keep your particular residence at a COMFORTABLE temperature all winter.

The Health of Your Family Depends on the Air They Breathe

The Lennox TORRID ZONE Furnace, made of BOILER PLATE STEEL, "RIVETED AND CALKED," Gas and Smoke Tight, is the only type that will assure you of CONTINUOUS CLEAN, WARM, MOIST, FRESH AIR, absolutely essential to continued good health. It automatically vaporizes the air, and is made in over sixty sizes to meet every heating requirement. The TORRID ZONE will save its cost in fuel over any average type furnace, and was the first furnace to be guaranteed for ten years.

You may buy your Torrid Zone on the building and loan plan, on easy monthly payments.

THE Lennox Furnace Company INC.
World's Largest Manufacturers of Steel Furnaces.
Marshalltown, Iowa. Syracuse, New York.



Lennox Torrid Zone Furnaces are sold and installed by the following Authorized Heating Engineers

WILLIAM BOS, 6840 S. Racine Ave. Normal 8363.

WALTER ANDERSEN, 5454 W. Chicago Ave. Austin 1579.

GEORGE BUECHELE, 5809 Montrose Ave. Kildare 8391.

G & S STOVE & FURNACE CO., 4224 W. North Ave. Albany 7881.

JOHN REIF CO., 3049 Belmont Ave. Lake View 0018.

WILLIAM F. WAHLER, 3715 Elston Ave. Irving 4372.

H. M. KRESS, West Chicago, Ill. Phone 32.

DAVID DE REMER, 1711 141st St., East Chicago, Ind. Indiana Harbor 1351.

JOSEPH KOUBEK & SON, 8234 W. 22nd St., Cicero, Ill. Cicero 3502.

JOSEPH KRAUS, 1717 Sheridan Road, North Chicago, Ill. Phone 1953.

Reproduction of Advertisement Used in Herald and Examiner September 2, 1927.
The Original Was 6x10 Inches and Was Placed Near the Front of the Paper

tisement is to appear which they thought would do the most good. This day they selected as Friday for the reason that Friday's morning paper is apt to be the longest lived of any during the week. It is apt to be left in the house until Sunday. Then, too, it is nearest to the day when the majority of men receive their weekly pay, which, of course, would naturally influence their buying. Some form of this advertisement will appear each week on Friday in the *Chicago Herald and Examiner*. The names on the advertisement will be altered from week to week so that no one of the installers will occupy the position at the head of the column more than once in 11 times.

Some of these men represented by this advertising program are members of the Cook County Sheet Metal Club. They are all intensely interested in the betterment of the warm air heating industry, and they have gone into this advertising program with a will to win.

That this advertising is going to exert a favorable influence on the public to which these men sell is very forcibly proved by an experience of Mike Reif, proprietor of the John Reif Company, 2049 Belmont Avenue. Mr. Reif, in speaking of the pulling power of the advertisement, said that only three hours after the issue containing the first of the series reached the homes a doctor called him on the telephone and told him of a home in which there was an opportunity of selling a warm air heating plant. Here was a direct positive "kick back" on the advertising only three hours after the ad itself appeared, which is highly encouraging to say the least.

In this work of getting a coöperative advertising program together, it would be the better policy to get the entire series together before starting the campaign. Or if it is impossible to get the entire series together before starting, the copy should be prepared for at least four or five issues ahead.

Great care should also be exercised to see that the copy is written

by someone thoroughly conversant with the objective it is desired to attain. That is, the work of writing the advertisement should not be left entirely to the copy writers of the newspapers in which the ad is to appear. These men may be expert ad writers in a general way, but they cannot be expected to know all about every field about which they write. For this reason they are apt to miss the point you wish to bring to your readers. They should, therefore, have your guidance in the matter of copy writing, even though you do not feel that you have the ability or the time to write the copy yourself.

As a matter of fact, the best advertisements are written by the men within the industry; by the men

who know the industry from beginning to end; by the men who know their products and what they will do, and by the men who know the consumers of their products.

A man may be an excellent merchandiser in a general way and his ideas on merchandising may all be adaptable to any one of a number of industries, but it takes someone within the industry represented to give that advertisement the peculiar little twist which makes it individual and ties the warm air heating industry up with some experience of the reader, and thus makes it possible for him to understand the language that is being spoken.

More important than anything else is to get a thorough understanding of the time when the copy

Is the Heat in Your Home Comfortable and Clean?

If your home is not comfortable in every room, regardless of outside weather conditions, then the installation of your furnace is not in compliance with the "STANDARD CODE." You will be repaid many times both in COMFORT and DOLLARS (thru the saving in fuel) by having a COMPETENT WARM AIR HEATING ENGINEER correct your present installation to comply with the "STANDARD CODE."

The Air in Your Home Should Be Clean

If the air in your home is not CLEAN, then it is the fault of the furnace. It is the fault of your furnace if you receive any gas, smoke, soot or dirt thru your heating system. These evils are common with ALL CAST IRON FURNACES, sooner or later, as their various sections and cemented joints crack and then allow such conditions to prevail.

A LENNOX TORRID ZONE ALL STEEL (riveted) FURNACE will never crack and allow gas, smoke and dirt to enter your home. It is built of BOILER PLATE STEEL, RIVETED and CALKED, and is available in over 30 sizes for every heating requirement. It vaporizes the air, and is the only type furnace that will assure you of CONTINUOUS CLEAN, MOIST WARM AIR, so essential to Good Health and Comfort.

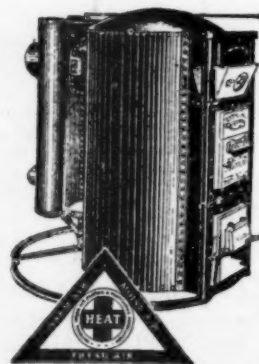
The TORRID ZONE will save its cost in fuel over any average type furnace and is guaranteed unconditionally for TEN YEARS.

Before deciding on your heating system call a LENNOX HEATING ENGINEER and he will measure your home in compliance with the "STANDARD CODE."

A TORRID ZONE FURNACE STANDARD CODE installation — A PERFECT WARM AIR HEATING SYSTEM.

You can purchase your TORRID ZONE HEATING SYSTEM on the building and loan monthly payment plan.

THE **Lennox**
Furnace
Company
INC.
World's Largest Manufacturers of Steel Furnaces
Marshalltown, Iowa. Syracuse, New York



Lennox Torrid Zone Furnaces are sold and installed by the following Authorized Heating Engineers

WALTER ANDERSON, 5654 W. Chicago Ave. Austin 1579.

WILLIAM BOS, 6840 S. Racine Ave. Normal 5363.

GEORGE BUECHELE, 5809 Montross Ave. Kildare 8391.

C & S STOVE & FURNACE CO., 4224 W. North Ave. Albany 7891.

JOHNSON FURNACE WORKS, Inc., 712 W. 79th St. Stew. 1048.

JOHN REIF CO., 2049 Belmont Ave. Lake View 0518.

WILLIAM F. WAHLER, 3715 Elston Ave. Irving 4372.

SUBURBAN

H. M. KRESS, West Chicago, Ill. Phone 32.

DAVID DE REMER, 1711 141st St., East Chicago, Ind. Indiana Harbor 1351.

JOSEPH KOUBEK & SON, 5234 W. 22nd St., Cicero, Ill. Cicero 3502.

JOSEPH KRAUS, 1717 Sheridan Road, North Chicago, Ill. Phone 1953.

Replica of Advertisement Used in Herald and Examiner September 16, 1927. This Advertisement Was 6x8 Inches and Was Also Placed Well Forward

UTILITY

A useful product is not just a happening but the result of years of patient, careful effort. Prest-O-Lite dissolved acetylene has been on the market for twenty-two years, with an ever-increasing volume of sales. That is proof of utility.

THE PREST-O-LITE COMPANY, INC.

Unit of Union Carbide and Carbon Company

General Offices: Carbide and Carbon Bldg., 30 East 42d St., New York

31 Plants—101 Warehouses



Prest-O-Lite

DISSOLVED ACETYLENE

Attention AMERICAN ARTISAN in your reply—Thank you!

must be in the hands of the paper in order to have it appear in a certain issue. Make your plans far enough in advance so that you will not have to hurry. No advertising copy that was worthy of the name was ever written in a hurry. The good advertising copy writer never allows his copy to smack of the rush. His ideas are studied with the view to getting his message across in the shortest possible time and with the greatest effect. And this cannot be done in a hurry.

This effort of the Lennox furnace dealers in Chicago to carry on a coöperative advertising campaign is not the first to come to our attention. Several weeks ago we ran an account of what the southtown Chicago sheet metal and warm air heating men are doing in the way of a coöperative advertising campaign, but all these men must be given credit for their desire to see the warm air heating industry improve and for their willingness to spend a portion of their resources to bring about that effect.

National Warm Air Heating Association Adopts Identification Card

It is a distinct advantage to sheet metal contractors and dealers who have continual contact with furnace manufacturer's representatives to know whether these men are representing members of the National

Warm Air Heating and Ventilating Association.

Members of the Association have access to the research work at the University of Illinois and hence are in a position to take full advantage of this information for the improvement of furnace design and for the most approved practices in installation. They have the advantage of the lists of furnace prospects gathered through the national advertising of the Association. They also are in a position to cooperate more fully with dealers by reason of their right to use material furnished by the Publicity Bureau of the Association.

It is to the dealer's interests to know which of the representatives that call on him are thus placed in a position of advantage.

For this purpose the Association has issued an identification card which is being furnished to all members of the Association to be passed on to their representatives. This card identifies the bearer with the present national effort to raise the standard of warm air heating and is evidence that he is associated with a manufacturing concern that is serious enough in its efforts in this direction to give their time, money and moral support for the cause of warm air heating.

It is urged that dealers insist upon seeing this card when a representative calls on them with the view to selling furnaces.

John M. Wallace, Chicago Hardware Man, Dies September 19

John M. Wallace, of the William Wallace & Sons Hardware, 513 North Wells, Chicago, died at his home, 4416 North Sawyer Avenue, Chicago, Monday, September 19, 1927.

Mr. Wallace was a member of the Chicago Retail Hardware Association, of the Illinois Retail Hardware Association, the Winchester Club of Chicago, the Central Lions' Club, the Machinery Club of Chicago. He was also a member of the Eagles, Humboldt lodge, member of the I. O. O. F. No. 402, the golden Rule Lodge No. 47, and a member of the Columbian Circle.

He was a member of the Veterans Corps 132nd Infantry; Ben Hur lodge No. 818, A. F. & A. M.; Lafayette chapter No. 2, R. A. M.; Palestine council No. 66; Apollo Commandery No. 1.

Funeral services were held from the Oriental Consistory, 915 North Dearborn Street, under the auspices of the Apollo Commandery No. 1 and the Ben Hur lodge No. 818, A. F. & A. M.

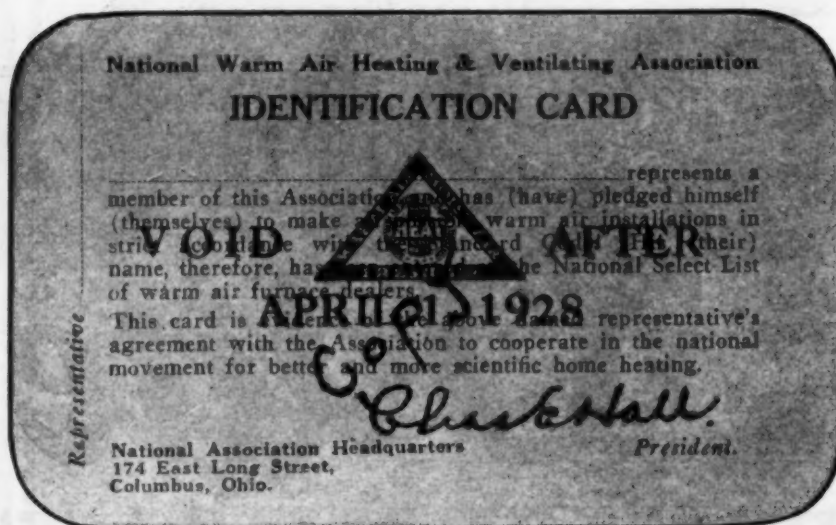
Mr. Wallace is survived by his widow, Sadie Wallace; one son, William, and two daughters, Florence and Elaine.

Doings Among the Old Guard Southern Hardware Salesmen

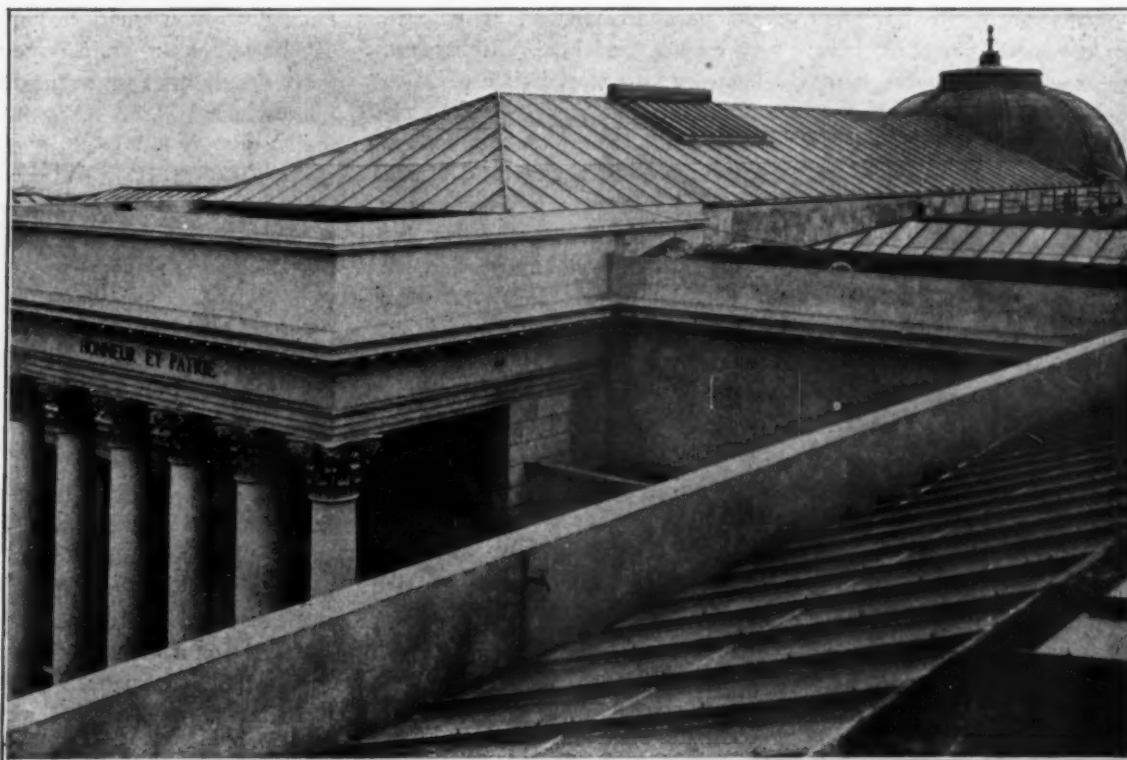
Marcus Alonzo Cook, with the Southern Plow Company, Columbus, Georgia, has been elected to membership in the Old Guard Southern Hardware Salesmen's Association. When he qualifies we will have a full membership and a lengthy waiting list.

A recent Baltimore paper contained a pleasant write-up of one of the senior members, Major A. W. Bond, commenting on his being past 85 and driving his own car.

Major and Mrs. Bond, who is also past 80, live an ideal life; God bless them. Major Bond has retired from the road, but still visits his jobbing customers in Baltimore. He



Reproduction of Identification Card



View of a part of the 30,000 square feet of Toncan framed skylights on the Palace of the Legion of Honor at San Francisco

This Sheet Metal Contractor— “Increases Business 50 Per Cent”

ENTERPRISING sheet metal contractors can increase their business and profits by going after volume business if they specify Toncan Iron.

National advertising on Toncan Copper Mo-lyb-den-um Iron, appearing every four weeks in *The Saturday Evening Post*, is increasing the prestige of contractors who recommend this super-iron. They are getting larger jobs which, before, they did not dare to go after.

Thomas J. Guilfooy, of the Guilfooy Cornice Works, San Francisco, one of whose notable installations is the Palace of the Legion of Honor pictured above, writes: “Since Toncan was placed on the market, I have increased my business over 50%, and the reason is easily ex-

plained. In using Toncan I am giving my client the best metal in the market, barring copper, for cornices, gutters, skylights and other sheet metal work on buildings, and my customer soon realizes that he has very few repairs on a Toncan job. Consequently when he builds again, I have no trouble in securing the job against my competitors, most of whom use steel, because it is a fraction cheaper. But my contention is that I am in reality the gainer, because Toncan is more pliable, consequently takes less time to form, saving considerable labor, which more than offsets the difference in cost.”

You, too, can make more money. Write for our new booklet, “Speeding Up Sheet Metal Profits.”



Toncan is Used
for

Roofing, Siding, Cornices, Metal Lath, Window Frames, Culverts, Ventilators.

CENTRAL ALLOY STEEL CORPORATION
Massillon, Ohio

Cleveland	Makers of Agathon Alloy Steels	St. Louis
Syracuse	Detroit	Chicago
San Francisco	Philadelphia	New York
	Los Angeles	Seattle
	Tulsa	Cincinnati

Toncan is Used
for

Furnaces, Gutters, Spouting, Flashing, Ranges, Refrigerators, Tables.

WORLD'S LARGEST AND MOST HIGHLY SPECIALIZED ALLOY STEEL PRODUCERS

is also president of the board of governors and chairman of the managers committee for the Maryland Confederate Soldiers' Home. He visits the old fellows often and is deeply interested in them. He is a typical southern soldier and gentleman of the old school and we trust he may live many more years and that the rising generation may know him well so that they may have a living picture of what a real fighting old Johnnie Reb was like.

A beautiful compliment was shown Joseph M. Hottel by the Supply Convention recently held. When on a lake steamer one evening a procession about 400 strong was formed with Mrs. Arthur Langston and Mrs. Hugo Weidmann at the head. The procession halted at Mr. Hottel's chair and the ladies presented him with gorgeous bouquets. Several members made complimentary speeches and Mr. Hottel, although almost overcome with emotion, responded in eloquent and befitting language.

Edward Newey, who spent several months in Canada, has returned to work much improved in health. George Harper and George Hillman also spent their vacations in Canada. John H. Heimbuecher has returned to St. Louis after a summer's tour in New England. He carries his 85 years lightly and enjoys life like a young sprig.

Frank K. Pedrick Will Manage Ottumwa, Iowa, New Hardware

Ottumwa's newest retail hardware store, located on a site which has been identified with the retail hardware business for the past 35 years, was opened this month. The store is that of the Quality Hardware Company at 322 East Main Street, Ottumwa, Iowa, which, until recently, was occupied by the McCarroll Bros. Hardware Company.

Extensive remodeling work has been done to the interior of the Quality Hardware Company store and its arrangement marks it as a thoroughly modern one.

The store is managed by Frank

K. Pedrick, a native of Wapello County. The latter has been actively engaged in the hardware business since 1913 when he entered the employ of the Richardson Hardware Company at Fairfield in Jefferson County. Pedrick remained with the Fairfield company until the United States declared war on Germany in 1917, when he joined the navy. Following his discharge from the navy, Pedrick joined the sales force of the Orchard & Wilhelm Furnishing Company in Omaha, Nebraska, and later was with the Peter Donnelly Hardware Company in San Francisco.

In 1923, the present manager of the Quality Hardware Company decided to return to Iowa and was hired by the management of the Harper & McIntire Wholesale Hardware Company branch house in Cedar Rapids. He remained with the latter company until early this year, when he was placed in charge of the local concern which succeeded the McCarroll Bros. Company in the location at 322 East Main Street.

In his several years' intimate connection with the hardware business Pedrick has acquired a wide knowledge of principles underlying the successful management of the retail end. He expects to maintain in the Quality store, quality stock at all times.

Hardware Special to Carry Midwest Conventionites to Atlantic City

"Ned" Swift and "Bob" Jones have arranged with the Baltimore & Ohio Railroad to run a "Hardware Special" from Chicago to Atlantic City for the convenience of the men and women attending the convention of the American Hardware Manufacturers' Association and the National Hardware Association of the United States.

The train will leave the Grand Central station, Harrison and South Wells Streets, Chicago, at 11:30 a. m., Sunday, October 16.

Here is the program that will be adhered to en route:

Sunday, October 16th

The personnel of those on board and their location in train will be handed to you upon leaving Chicago. The entire train is yours, so move around and get acquainted.

Luncheon, 11:30 a. m. to 1:30 p. m.

As usual, a high class banquet will be served on board the train at 5:30 p. m. by the manufacturers and trade papers to the jobbers and their ladies, which is always unique in its arrangements and which you cannot afford to miss.

Monday, October 17th

Breakfast in dining car from 6:30 a. m. to 10:00 a. m.

10:20 a. m.—Arrive Philadelphia. Taxicabs will convey the party over one of Philadelphia's principal thoroughfares to the foot of Chestnut Street, where ferry boat will be boarded for a most interesting trip across the Delaware River.

10:50 a. m.—Leave Camden, N. J., via special parlor car train of the Atlantic City Railroad.

Full information can be had from E. R. Swift, 61 West Kinzie Street, Chicago, Illinois. Reservations should be made direct to Ed Corcoran, City Pass. Agent, B. & O., R. 607, 112 W. Adams St., Chicago. An all-expense rate has been adopted.



American Hardware Manufacturers' Association, Atlantic City, New Jersey, October 17 to 20, 1927. Headquarters Marlborough-Blenheim Hotel. Charles F. Rockwell, 342 Madison Avenue, New York City, Secretary.

National Hardware Association of the United States, Atlantic City, New Jersey, October 17 to 20, 1927. George A. Fernley, 505 Arch Street, Philadelphia, Secretary.

Metal Branch National Hardware Association of the United States, Atlantic City, New Jersey, Tuesday afternoon, October 18, 1927. Headquarters, Marlborough-Blenheim Hotel. F. O. Schoedinger, Columbus, Ohio, Chairman.

National Warm Air Heating and Ventilating Association, Mid-year meeting, Urbana, Illinois, November 30 and December 1, 1927. Urbana-Lincoln Hotel headquarters. Allen W. Williams, 174 East Long Avenue, Columbus, Ohio, Secretary.



**Doubly Durable
Because
Doubly Protected**

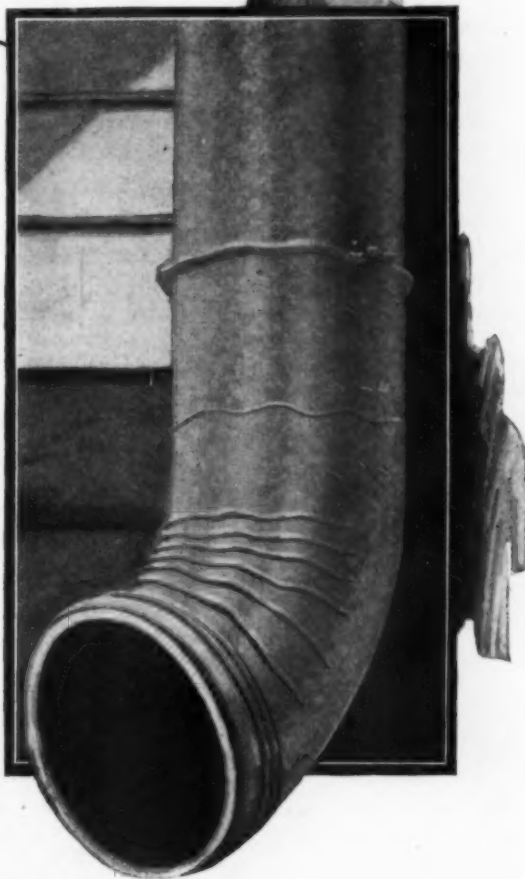
- 1** The base metal is the highly rust-resistant Copper Alloy, known everywhere as Ohio Metal.
- 2** The conductor is completely formed and finally hand-dipped in pure molten zinc.

A SAMPLE of Wheeling Hand-Dipped Conductor will enable you to judge why the trade, generally, accepts it as the most satisfactory and the most economical conductor made.

Note that the metal base is completely imbedded in a thick, impenetrable protective coating of pure zinc. Note also that the seams, edges and surfaces are thoroughly and uniformly covered—the result of *hand-dipping after forming*.

Exposed to the air, the zinc first protects itself by a natural surface oxidation. This ceases abruptly after closing the pores of the zinc and a lasting barrier to the elements is the result.

Made of Ohio Metal, hand-dipped in pure molten zinc, this conductor is stronger, more rigid and doubly durable. Let us send you a sample for close-up inspection.



Wheeling

HAND DIPPED CONDUCTOR

Wheeling Corrugating Company, Wheeling, W. Va.

NEW YORK
ST. LOUIS

PHILADELPHIA
RICHMOND

CHICAGO
CHATTANOOGA

KANSAS CITY
MINNEAPOLIS

Demand for Finished Steel Drops—Prices Are Unsteady

Pig Iron Market Is Quiet—Buying of Nonferrous Metals Lags

IN BOTH demand and price the drift in finished steel has been downward the past week. Continued indifference on the part of tonnage users, still closer buying by small consumers and unsettled prices have resulted in one of the lightest buying weeks this year.

Excepting the Mahoning valley, where there has been a slight upturn in some lines, production rates have either been stationary or moderately curtailed, and the country's steel-making average is now down almost to 65 per cent. Price weakness is evident in plates, bars, shapes, cold finished bars, pipe and some grades of sheet and strip.

The Steel corporation, in its first important price determination since the death of Judge Gary, appears to have adopted a more aggressive policy toward competition. Its subsidiaries have revised their prices to 1.75 cents, Pittsburgh, and 1.85 cents, Chicago, on tonnages of bars, plates and shapes with a \$2 differential—as yet untested—on small lots. Some independent producers are following the corporation's lead. The price situation is tense and in some quarters it is believed the situation is not yet clarified.

Pig Iron

The pig iron market at Pittsburgh remains exceptionally quiet, although contract customers are taking out their iron. Details are not available here concerning a reported large tonnage sale of basic iron in the valley at \$17, but producers recognize that figure as replacing \$17.25, the quotation prevailing nominally since a malleable castings manufacturer paid that price some time ago.

A small lot of malleable was bought yesterday at \$17.50, valley. Sales of foundry iron are fewer than several weeks ago. Some Delaware river low-phosphorus copper-

free iron was sold here this week in lots of 200 and 400 tons at \$25, furnace, with a \$4.66 freight rate. Valley producers still adhere to \$27.50, valley.

At Chicago sales of northern pig iron for extended delivery still are slow in developing. Spot buying and inquiry are fair, with few inquiries above 500 tons. Orders largely are for rush shipment. Shipments are nearly equal to last month, and sales are not far behind.

Reports are heard of offers at \$19, base, for iron to be shipped by an eastern steelworks by boat, but it is understood no orders have been closed. Despite weaker prices offered west of Chicago at Illinois points the market is holding at \$19.50, Chicago and Milwaukee districts, for No. 2 foundry and malleable.

Furnace interests at Birmingham indicate a willingness to take business for fourth quarter with the price base continuing at \$17.25. No such sales are reported. Small lot buying for this quarter continues.

Copper

Some business has been done in copper the past week at 13.25 cents, Connecticut, and $\frac{1}{8}$ to $\frac{1}{4}$ cent more in the Midwest. A large export business was done at 13.50 cents, c. i. f., European ports. It looks as if it would not take much more buying to put the market up $\frac{1}{8}$ cent, as several large producers have withdrawn from the market.

Most of the buying is for October, with some for September and a little for November. It is believed that the bulk of October needs remain to be covered.

Tin

Buying of tin by users has been unusually light for a month or so, and with supplies continuing of good size the price has fallen. It is

said that some dealers have been disappointed and unloaded.

Users have not bought a great deal beyond October but have done scattered buying as far ahead as February. Low prices have not proved to be an attraction. It still is a little early for covering of needs for next year.

Zinc

Prime western zinc has been easy with added impetus to this side of the market on news of \$1 off the ore price last Saturday. Output of ore again was larger than sales though a fair quantity sold at \$41 a ton. Some business was done last week, mostly for October, but the market has no snap. The situation in other grades is unchanged.

Lead

The lead market is looking a little brighter, and the St. Louis price has moved up $7\frac{1}{2}$ points from 6.00 cents. Some quotations are heard still higher. On New York basic prices run from 6.25 cents to 6.35 cents but the lower price represents the bulk of direct consumer business.

Solder

Chicago warehouse prices on solder are as follows: Warranted 50-50, \$37.75; Commercial 45-55, \$34.75; plumbers', \$31.75, all per 100 pounds.

Old Metals

Wholesale quotations in the Chicago district, which should be considered as nominal, are as follows: Old steel axles, \$17.00 to \$17.50; old iron axles, \$19.50 to \$20.00; steel springs, \$15.00 to \$15.50; No. 1 wrought iron, \$11.25 to \$11.75; No. 1 cast, \$13.25 to \$13.75, all per net tons. Prices for non-ferrous metals are quoted as follows, per pound: Light copper, 9 cents; zinc, $3\frac{1}{2}$ cents; cast aluminum, $13\frac{3}{4}$ cents.

Two Brands with but a Single Thought—

“TAYLOR QUALITY”

For those who want the best roofing tin that can be had,
we recommend our **HAND MADE**

TARGET AND ARROW

For those who want the best machine made plate that can
be made, we offer our

TAYLOR'S EXTRA COATED 40 lb. Copper Bearing O. H.

Years of experience have taught Architects and Builders
to accept **TAYLOR QUALITY** on sight. This means
sales for roofers who use roofing tin made by

N. & G. TAYLOR COMPANY

Broad and Arch Streets

PHILADELPHIA

Headquarters for Good Roofing Tin Since 1810

RYERSON

IMMEDIATE SHIPMENT FROM STOCK

More than twenty kinds of sheets are carried in stock. Also Bars,
Angles, Rivets, Bolts, Tools and Metal-Working Machinery.

Write for Journal and Stock List

JOSEPH T. RYERSON & SON Inc.

Chicago
Detroit

St. Louis

Milwaukee

Cincinnati

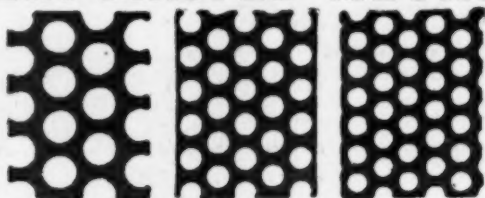
Jersey City

Cleveland

Boston
Buffalo

SHEETS

PERFORATED METALS



All Sizes and Shapes of Holes
In Steel, Zinc, Brass, Copper, Tinplate, etc.
For All Screening, Ventilating and Draining
EVERYTHING IN PERFORATED METAL

THE HARRINGTON & KING PERFORATING CO.

5649 FILLMORE ST.—CHICAGO, ILL., U. S. A.
NEW YORK OFFICE, 118 LIBERTY ST.



*At the
Service
of Steel
Users*

INLAND STEEL COMPANY

38 South Dearborn Street, Chicago

Works: Indiana Harbor, Indiana; Milwaukee, Wisconsin
Chicago Heights, Illinois

Branch Offices and Representatives

ST. PAUL • ST. LOUIS • SALT LAKE CITY • MILWAUKEE
KANSAS CITY • NEW ORLEANS • EL PASO

Chicago Warehouse Metal and Furnace Supply Prices

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS

PIG IRON

Chicago Fdy., No. 2.....	\$19 50
Southern Fdy., No. 2.....	23 25
Lake Superior Charcoal.....	27 04
Malleable.....	19 50

FIRST QUALITY BRIGHT TIN PLATES

IC 20x28 112 sheets.....	\$25 10
IX 20x28.....	29 60
IXX 20x28 56 sheets.....	16 20
IXXX 20x28.....	17 55
IXXXX 20x28.....	18 95

TERNE PLATES

	Per Box
IC 30x28, 40-lb. 112 sheets	\$26 00
IX 20x28, 40-lb. 112 sheets	28 50
IC 20x28, 26-lb. 112 sheets	21 75
IX 20x28, 26-lb. 112 sheets	24 25
IC 20x28, 20-lb. 112 sheets	20 00
IX 20x28, 20-lb. 112 sheets	22 50
IC 20x28, 16-lb. 112 sheets	18 50

"ARMCO" INGOT IRON PLATES

No. 8 ga. up to and including	
1/4 in.—100 lbs.....	\$4 55

COKE PLATES

Cokes, 80 lbs., base, 20x28.	\$13 60
Cokes, 90 lbs., base, 20x28.	13 80
Cokes, 100 lbs., base, 20x28.	14 00
Cokes, 107 lbs., base, IC	
20x28.....	14 20
Cokes, 155 lbs., base IX	
20x28.....	16 40
Cokes, 155 lbs., base, 56	
sheets.....	9 20
Cokes, 175 lbs., base, 56	
sheets.....	10 05
Cokes, 195 lbs., base, 56	
sheets.....	10 90

BLUE ANNEALED SHEETS

Base 10 ga.per 100 lbs.	\$3 50
"Armco" 10 ga.per 100 lbs.	4 00

ONE PASS COLD ROLLED BLACK

No. 18-20.....per 100 lbs.	\$3 75
No. 22.....per 100 lbs.	3 90
No. 24.....per 100 lbs.	3 95
No. 26.....per 100 lbs.	4 05
No. 27.....per 100 lbs.	4 10
No. 28.....per 100 lbs.	4 20
No. 29.....per 100 lbs.	4 25
No. 30.....per 100 lbs.	4 45

"ARMCO" GALVANIZED

"Armco" 24.....per 100 lbs.	\$6 15
-----------------------------	--------

GALVANIZED

No. 16.....per 100 lbs.	\$4 30
No. 18.....per 100 lbs.	4 45
No. 20.....per 100 lbs.	4 60
No. 22.....per 100 lbs.	4 65
No. 24.....per 100 lbs.	4 80
No. 26.....per 100 lbs.	5 05
No. 27.....per 100 lbs.	5 15
No. 28.....per 100 lbs.	5 30
No. 30.....per 100 lbs.	5 70

BAR SOLDER

Warranted	
50-50.....per 100 lbs.	\$37 75

Commercial	
45-55.....per 100 lbs.	34 75
Plumbers.....per 100 lbs.	31 75

ZINC

In Slabs.....	\$ 8 50
---------------	---------

SHEET ZINC

Cash Lots (600 lbs.).....	\$13 00
Sheet Lots.....	13 00

BRASS

Sheets, Chicago base.....	17 1/2 c
Mill Base.....	18 c
Tubing, brass base.....	26 1/2 c
Wire, base.....	18 1/2 c
Rods, base.....	15 1/2 c

COPPER

Sheets, Chicago base.....	22 c
Mill Base.....	21 c
Tubing, seamless base.....	25 c
Wire, No. 9, B & S Ga.....	18 1/2 c
Wire, No. 10, B & S Ga.....	18 1/2 c
Wire, No. 11, B & S Ga.....	19 c
Wire, No. 8, B & S Ga. and heavier.....	17 1/2 c

LEAD

American Pig.....	\$7 00
Bar.....	8 00

TIN

Big Tin.....per 100 lbs.	\$71 00
Bar Tin.....per 100 lbs.	72 00

HARDWARE, SHEET METAL SUPPLIES, WARM AIR FURNACE FITTINGS AND ACCESSORIES.

ASBESTOS

Paper up to 1/16.....	6c per lb.
Roll board.....	6 1/2 c per lb.
Mill board 3/32 to 1/2.....	6c per lb.
Corrugated Paper (250 sq. ft. to roll).....	\$6 00 per roll

BRUSHES

Hot Air Pipe Cleaning	
Bristle, with handle, each	\$0 85
Flue Cleaning	
Steel only, each.....	1 25

BURRS

Copper Burrs only.....	40-5%
------------------------	-------

CEMENT, FURNACE

American Seal, 5-lb. cans, net	\$ 40
American Seal, 10-lb. cans, net	30
American Seal, 25-lb. cans, net	2 07
Pecora.....per 100 lbs.	7 51

CHIMNEY TOPS

	Wt. Doz.	Prize Doz.
4 in.....	21 lbs.	\$11 00
6 in.....	24 lbs.	11 50
7 in.....	30 lbs.	13 50
8 in.....	33 lbs.	15 00
9 in.....	51 lbs.	16 50
10 in.....	56 lbs.	18 00
12 in.....	66 lbs.	22 00
14 in.....	110 lbs.	36 00

CLINKER TONGS

Front Rank, each.....	\$0 75
Per doz.....	8 40

CLIPS

Damper	
Adams No-Rivet Steel, with	
tail pieces, per gross.....	\$9 00
Tail pieces, per gross.....	2 50

COPPERS—Soldering

Pointed Roofing	
3 lb. and heavier.....per lb.	40c
2 1/2 lb.per lb.	45c
2 lb.per lb.	48c
1 1/2 lb.per lb.	55c
1 lb.per lb.	60c

CORNICE BRAKES

Chicago Steel Bending	
Nos. 1 to 6B.....	Net

CUT-OFFS

Gal., plain, round or cor. rd.	
26 gauge.....	30%
28 gauge.....	35%

DAMPERS

"Yankee" Hot Air	
7 inch, each 20c, doz.....	\$1 75
8 inch, each 25c, doz.....	2 40
9 inch, each 30c, doz.....	2 75
10 inch, each 32c, doz.....	3 00

Smoke Pipe	
7 inch, each.....	\$0 35
8 inch, each.....	40
9 inch, each.....	50
10 inch, each.....	60
12 inch, each.....	90

ADAMS No. 1 CHECK

Check and Collar Complete	
8 inch, each.....	\$2 00
9 inch, each.....	2 25

End Check Only	
8 inch, each.....	1 60
9 inch, each.....	1 85

Collar Only	
8 inch, each.....	50
9 inch, each.....	65

No. 2 CHECK

8 inch, each.....	1 00
9 inch, each.....	1 00
10% Disc. on Adams No. 1 and No. 2 Check	

Diamond Smoke Pipe	
7 inch, doz.....	\$ 2 00
8 inch, doz.....	3 20
9 inch, doz.....	4 80
10 inch, doz.....	6 00

Adams' Sheet Metal

7 inch, doz.....	\$ 1 60
8 inch, doz.....	2 20
9 inch, doz.....	2 60
10 inch, doz.....	3 20
12 inch, doz.....	3 50
14 inch, doz.....	5 00

DIGGERS

Post Hole	
Iwan's Split Handle	
(Eureka)	
4-ft. Handle.....per doz.	\$14 00
7-ft. Handle.....per doz.	36 00
Iwan's Hercules pattern,	
per doz.....	14 90

EAVES TROUGH

Galv. Crimpedge, crated 75 & 5%	
Zinc, "Barnes".....	60%

ELBOWS

Conductor Pipe	
Galv., plain or corrugated,	
round flat Crimp.....	
28 Gauge.....	60%
26 Gauge.....	45%
24 Gauge.....	15%

Galv. & Terne Steel	
Plain Rd. and Rd. Corr.:	
28 Ga.	60%
26 Ga.	45%
24 Ga.	15%

Square Corrugated	
No. 28 Gauge.....	50%
26 Gauge.....	35%

Portico Elbows	
Standard Gauge Conductor Pipe,	
plain or corrugated.....	
Not nested.....	70 & 5%
Nested solid.....	70 & 5%

Sq. Corr., A. & B. & Octagon:	
28 Ga.	50%
26 Ga.	35%

Portico	
1", 1 1/4", 1 1/2".....	45%

Copper	
16 oz., all designs.....	45%

Zinc—	
All styles.....	60%

ELBOWS—Stove Pipe

1-piece Corrugated, Uniform	Blue
"Milcor" No. 28 Gauge, Doz.	
5-inch.....	\$1 25
6-inch.....	1 35
7-inch.....	1 75

Special Corrugated

6-inch.....	\$1 00
7-inch.....	1 60

Adjustable—Uniform Blue

"Milcor" No. 28 Gauge, Uniform	
Blue, Doz.	
5-inch.....	\$1 75
6-inch.....	1 85
7-inch.....	2 15

WOOD FACES—50% off list.

FENCE	
724-6-12 1/4 (100 rods).....	\$28 68
1948-6-14 1/4 (100 rods).....	43 63

FILES AND RASPS

Heller's (American).....	50-10%
American.....	60-10%
Archie.....	50%
Black Diamond.....	50%
Eagle.....	50%
Great Western.....	50%
Kearney & Foot.....	50%
McClellan.....	50%
Nicholson.....	50%
Simonds.....	60%

FIRE POTS

Clayton & Lambert's	
East of west boundary line of	
Province of Manitoba, Canada,	
No. Dakota, So. Dakota, Ne-	
braska, Kansas, Oklahoma, Am-	
arillo, San Angelo and Laredo,	
Texas.....	52%
West of above boundary.....	45%

Geo. W. Diener Mfg. Co.

No. 02 Gasolene Torch, 1	
qt.	\$ 5 55
No. 0250, Kerosene, or	
Gasolene Torch, 1 qt.	7 50
No. 10 Tinner's Furn.	
Square tank, 1 gal.	13 60
No. 15 Tinner's Furn.	
Round tank, 1 gal.	12 00
No. 21 Gas Soldering Fur-	
nace.....	2 60
No. 110 Automatic Gas	
Soldering Furnace.....	10 50

Double Blast Mfg. Co.

Gasolene, Nos. 25 and 36....	60%
------------------------------	-----

Quick Meal Stove Co.

Vesuvius, F. O. B. St. Louis	30%
(Extra Disc. for large	
quantities)	

GALVANIZED WARE

Falls (Galv. after made),	
10-qt.	\$2 12
Tubs (Galv. after made),	
No. 1.....	6 00
No. 2.....	6 35

GLASS

Single Strength, A, 25-in.	
brackets.....	67%
Single Strength, A, 34 to 40-	
in. bracket.....	56%
Single Strength, A, all other	
brackets.....	56%
Double Strength, A, all sizes.....	56%

HANGERS

Conductor Pipe	
Milcor Perfection Wire.....	25%
Eaves Trough	
Milcor Triplex Wire.....	10%
Milcor Steel (galv. after	
forming) List.....	plus 12 1/2%
Milcor Selflock E. T. Wire,	
List.....	plus 50%

HOOKS

Box	
V. & B. No. 1, each.....	\$0 26
Conductor	
"Direct Drive" Wrought	
Iron for wood or brick.....	15%
Hay	
V. & B. No. 1, each.....	\$0 26

HUMIDIFIERS

"Front-Rank," Automatic	
In single lots.....	50c
In lots of 10 or more.....	50-5%
In lots of 25 or more.....	50-10%
Vapor pans, etc., each.....	50%

LIFTERS

Stove Cover	
Coppered.....per gro.	\$4 00
Alaska.....per gro.	4 75

MALLETS

Tinners	
Hickory.....per doz.	\$3 25

MITRES

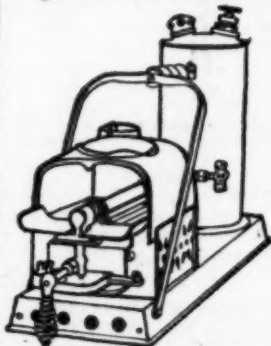
Galvanized steel mitres,	
22 Ga.	70
26 Ga.	60-20

NAILS

Cut Steel.....	\$4 25
Cut Iron.....	4 35
Wire	
Common.....	2 95
Cement Coated.....	3 95

(Continued on Page 170)

Improved Models of Soldering Furnaces



Have you seen the improved models? The greatest line of Soldering Furnaces today on the market. They should be. There is more experience behind them. Forty-eight years of it! The Gems were popular before the majority of present day furnaces were heard of. It is the oldest, the recognized standard Soldering Furnace today.

Look these models over. Each adds its class. Line them up and take your choice.

Do you want a Catalog?

BURGESS SOLDERING FURNACE CO.

Department A COLUMBUS, O.

Improved No. 3 Gem with Pump

-B.B.- LINE OF SHEET METAL SUPPLIES

B.B. CONDUCTOR HOOKS AND GUTTER HANGERS
"SHUR-LOCK" CONDUCTOR PIPE
OCTAGON AND POLYGON CONDUCTOR PIPE
"E-Z FIT" EAVES TROUGH
"QUAKER CITY" MITRES, ENDS, CAPS AND OUTLETS
EAVE TROUGH STRAP AND ROD HANGERS
ORNAMENTAL CONDUCTOR STRAPS AND ENDS

YOUR JOBBER CARRIES THEM IN STOCK FOR PROMPT SHIPMENT

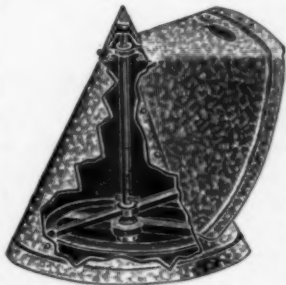
Manufactured by

BERGER BROS. CO.

229 to 237 ARCH STREET

PHILADELPHIA

The NEW IMPROVED "STANDARD" Rotable Ventilator



Patents pending

This favorite cone-shaped ventilator is now improved in several important points.

The weight of the ventilator body is now carried on a concave thrust bearing nested in the apex of the conical body. This bearing turns upon the pivot point of the stationary center spindle.

The bronze Guide Bushings are now made of non-corrosive bronze which minimizes friction and any tendency to screech when body is rotating.

There are other new features. Write today for new catalog and price list.

STANDARD VENTILATOR CO.,

LEWISBURG, PA.

CHICAGO STEEL CORNICE BRAKES STANDARD OF THE WORLD



THE BEST BRAKE FOR ALL PURPOSES: Most Durable, Easiest Operated, Low in Price; Made in All Lengths and to Bend All Gauges of Metal. Over 23,000 in use.

WRITE FOR PARTICULARS

DREIS & KRUMP MFG. CO., 7404 Loomis Street, CHICAGO

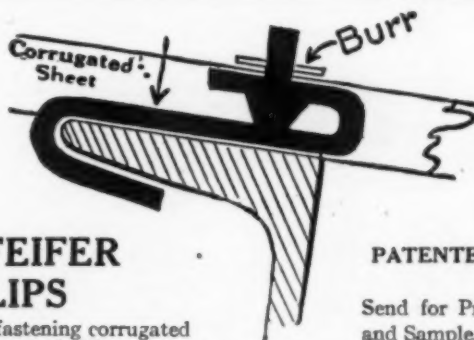
SPECO SOLID SAL AMMONIAC

for

**TINNING
and
CLEANING
BETTER
and
QUICKER**

WRITE FOR FREE SAMPLE

SPECIAL CHEMICALS CO.
WAUKEGAN, ILLINOIS



PFEIFER CLIPS

For fastening corrugated roofing and siding.

PATENTED

Send for Price and Sample.

WM. PFEIFER

473 Greenwich St.
New York, N. Y.

The W. J. BURTON CO. Detroit, Michigan

Forty-Four Years
Serving the
Sheet Metal Contractor
with

**SHEET METAL PRODUCTS
FOR BUILDINGS**

Chicago Warehouse Metal and Furnace Supply Prices

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS

PIG IRON

Chicago Fdy., No. 2.....	\$19 50
Southern Fdy. No. 2.....	23 25
Lake Superior Charcoal.....	27 04
Malleable.....	19 50

FIRST QUALITY BRIGHT TIN PLATES

IC 20x28 112 sheets.....	\$25 10
IX 20x28.....	29 60
IXX 20x28 56 sheets.....	16 20
IXXX 20x28.....	17 55
IXXXX 20x28.....	18 95

TERNE PLATES

IC 20x28, 40-lb. 112 sheets	\$26 00
IX 20x28, 40-lb. 112 sheets	28 50
IC 20x28, 25-lb. 112 sheets	21 75
IX 20x28, 25-lb. 112 sheets	24 25
IC 20x28, 20-lb. 112 sheets	20 00
IX 20x28, 20-lb. 112 sheets	22 50
IC 20x28, 15-lb. 112 sheets	18 50

"ARMCO" INGOT IRON PLATES

No. 8 ga. up to and including	
1/4 in.—100 lbs.....	\$4 55

COKE PLATES

Cokes, 80 lbs., base, 20x28	\$13 00
Cokes, 90 lbs., base, 20x28	13 80
Cokes, 100 lbs., base, 20x28	14 00
Cokes, 107 lbs., base, IC 20x28	14 30
Cokes, 115 lbs., base IX 20x28	16 40
Cokes, 115 lbs., base, 56 sheets	9 20
Cokes, 176 lbs., base, 56 sheets	10 05
Cokes, 195 lbs., base, 56 sheets	10 90

BLUE ANNEALED SHEETS

Base 10 ga. per 100 lbs.	\$5 50
"Armco" 10 ga. per 100 lbs.	4 00

ONE PASS COLD ROLLED BLACK

No. 18-20.....per 100 lbs.	\$3 75
No. 22.....per 100 lbs.	3 90
No. 24.....per 100 lbs.	3 95
No. 26.....per 100 lbs.	4 05
No. 27.....per 100 lbs.	4 10
No. 28.....per 100 lbs.	4 20
No. 29.....per 100 lbs.	4 25
No. 30.....per 100 lbs.	4 45

"ARMCO" GALVANIZED

"Armco" 24.....per 100 lbs.	\$6 15
-----------------------------	--------

GALVANIZED

No. 16.....per 100 lbs.	\$4 30
No. 18.....per 100 lbs.	4 45
No. 20.....per 100 lbs.	4 60
No. 22.....per 100 lbs.	4 65
No. 24.....per 100 lbs.	4 80
No. 26.....per 100 lbs.	5 05
No. 27.....per 100 lbs.	5 15
No. 28.....per 100 lbs.	5 30
No. 30.....per 100 lbs.	5 70

BAR SOLDER

Warranted	
50-50.....per 100 lbs.	\$27 75

Commercial	
45-55.....per 100 lbs.	34 75
Plumbers.....per 100 lbs.	31 75

ZINC

In Slabs.....	\$ 50
---------------	-------

SHEET ZINC

Cash Lots (400 lbs.).....	\$12 00
Sheet Lots.....	13 00

BRASS

Sheets, Chicago base.....	17% c
Mill Base.....	15c
Tubing, seamless base.....	25c
Wire, base.....	26% c
Rods, base.....	18% c

COPPER

Sheets, Chicago base.....	22c
Mill Base.....	25c
Tubing, seamless base.....	25c
Wire, No. 9, B & S Ga.....	18% c
Wire, No. 10, B & S Ga.....	18% c
Wire, No. 11, B & S Ga.....	19c
Wire, No. 8, B & S Ga. and heavier.....	17% c

LEAD

American Pig.....	\$7 00
Bar.....	8 00

TIN

Big Tin.....per 100 lbs.	\$71 00
Bar Tin.....per 100 lbs.	72 00

HARDWARE, SHEET METAL SUPPLIES, WARM AIR FURNACE FITTINGS AND ACCESSORIES.

ASBESTOS

Paper up to 1/16.....	6c per lb.
Roll board.....	4% c per lb.
Mill board 3/32 to 1/4.....	6c per lb.
Corrugated Paper (250 sq. ft. to roll).....	\$6 00 per roll

BRUSHES

Hot Air Pipe Cleaning	
Bristle, with handle, each	\$0 25

Fine Cleaning	
Steel only, each.....	1 25

BURRS

Copper Burrs only.....	40-5%
------------------------	-------

CEMENT, FURNACE

American Seal, 5-lb. cans, net	\$ 40
American Seal, 10-lb. cans, net	80
American Seal, 25-lb. cans, net	2 07
Pecora.....per 100 lbs.	7 51

CHIMNEY TOPS

Adams' Revolving	
4 in. Wt. Doz. 21 lbs.	\$11 00
6 in. 24 lbs.	11 50
7 in. 30 lbs.	13 50
8 in. 33 lbs.	15 00
9 in. 51 lbs.	16 50
10 in. 56 lbs.	18 00
12 in. 66 lbs.	22 00
14 in. 110 lbs.	36 00

CLINKER TONGS

Front Rank, each.....	\$0 75
Per doz.....	8 40

CLIPS

Damper	
Adams No-Rivet Steel, with	
tail pieces, per gross.....	\$9 00
Tail pieces, per gross.....	2 50

COPPERS—Soldering

Pointed Roofing	
3 lb. and heavier.....per lb.	40c
2 1/2 lb.per lb.	45c
2 lb.per lb.	45c
1 1/2 lb.per lb.	55c
1 lb.per lb.	60c

CORNICE BRAKES

Chicago Steel Bending	
Nos. 1 to 6B.....	Net

CUT-OFFS

Gal., plain, round or cor. rd.	
26 gauge.....	30%
28 gauge.....	35%

DAMPERS

"Yankee" Hot Air	
7 inch, each 20c, doz.....	\$1 75
8 inch, each 25c, doz.....	2 40
9 inch, each 30c, doz.....	2 75
10 inch, each 32c, doz.....	3 00

Smoke Pipe	
7 inch, each.....	\$0 35
8 inch, each.....	40
9 inch, each.....	50
10 inch, each.....	60
12 inch, each.....	90

ADAMS No. 1 CHECK	
Check and Collar Complete	
8 inch, each.....	\$2 00
9 inch, each.....	2 25

End Check Only	
8 inch, each.....	1 60
9 inch, each.....	1 85

Collar Only	
8 inch, each.....	50
9 inch, each.....	65

No. 2 CHECK	
8 inch, each.....	1 00
9 inch, each.....	1 00
10% Disc. on Adams No. 1 and No. 2 Check	

Diamond Smoke Pipe	
7 inch, doz.....	\$ 2 00
8 inch, doz.....	3 20
9 inch, doz.....	4 80
10 inch, doz.....	6 00

Adams' Sheet Metal

7 inch, doz.....	\$ 1 40
8 inch, doz.....	2 20
9 inch, doz.....	2 60
10 inch, doz.....	2 80
12 inch, doz.....	3 50
14 inch, doz.....	5 00

DIGGERS

Post Hole	
Iwan's Split Handle (Eureka)	
4-ft. Handle...per doz.	\$14 00
7-ft. Handle...per doz.	36 00
Iwan's Hercules pattern, per doz.....	14 90

RAVES TROUGH

Galv. Crimpedge, crated 75 & 5%	
Zinc, "Barnes".....	60%

ELBOWS

Conductor Pipe	
Galv., plain or corrugated, round flat Crimp.	
28 Gauge.....	60%
26 Gauge.....	45%
24 Gauge.....	15%

Galv. & Terne Steel

Plain Rd. and Rd. Corr.:	
28 Ga.....	60%
26 Ga.....	45%
24 Ga.....	15%

Square Corrugated

No. 28 Gauge.....	50%
26 Gauge.....	35%

Portico Elbows

Standard Gauge Conductor Pipe, plain or corrugated.	
Not nested.....	70 & 5%
Nested solid.....	70 & 5%

Sq. Corr., A. & B. & Octagon:

28 Ga.....	50%
26 Ga.....	35%

Portico

1", 1 1/4", 1 1/2".....	45%
-------------------------	-----

Copper

16 oz., all designs.....	45%
--------------------------	-----

Zinc—

All styles.....	60%
-----------------	-----

ELBOWS—Stove Pipe

1-piece Corrugated, Uniform Blue "Milcor" No. 28 Gauge. Doz.	
5-inch.....	\$1 25
6-inch.....	1 25
7-inch.....	1 75

Special Corrugated

6-inch.....	\$1 00
7-inch.....	1 60

Adjustable—Uniform Blue

"Milcor" No. 28 Gauge. Uniform Blue. Doz.	
5-inch.....	\$1 75
6-inch.....	1 85
7-inch.....	2 15

WOOD FACES—50% off list.

725-6-12 1/2% (100 rods).....	\$28 63
1943-6-14 1/2% (100 rods).....	43 62

FILES AND RASPS

Heller's (American).....	50-10%
American.....	60-10%
Arcade.....	60%
Black Diamond.....	60%
Eagle.....	60%
Great Western.....	60%
Kearney & Foot.....	60%
McClellan.....	60%
Nicholson.....	60%
Simonds.....	60%

FIRE POTS

Clayton & Lambert's	
East of west boundary line of Province of Manitoba, Canada, No. Dakota, So. Dakota, Nebraska, Kansas, Oklahoma, Amarillo, San Angelo and Laredo, Texas.....	52%
West of above boundary.....	48%

Geo. W. Diener Mfg. Co.

No. 02 Gasolene Torch, 1 qt.	\$ 5 55
No. 0250, Kerosene, or Gasolene Torch, 1 qt.....	7 50
No. 10 Tinner's Furn. Square tank, 1 gal.....	12 60
No. 15 Tinner's Furn. Round tank, 1 gal.....	12 00
No. 21 Gas Soldering Furnace.....	2 60
No. 110 Automatic Gas Soldering Furnace.....	10 50

Double Blast Mfg. Co.

Gasolene, Nos. 25 and 36.....	60%
-------------------------------	-----

Quick Meal Stove Co.

Vesuvius, F. O. B. St. Louis	30%
(Extra Disc. for large quantities)	

GALVANIZED WARE

Pails (Galv. after made), 10-qt.	\$2 12
Tubs (Galv. after made), No. 1.....	6 00
No. 2.....	6 25

GLASS

Single Strength, A. 25-in. brackets.....	87%
Single Strength, A. 34 to 40-in. bracket.....	86%
Single Strength, A. all other brackets.....	86%
Double Strength, A. all sizes.....	86%

HANGERS

Conductor Pipe	
Milcor Perfection Wire.....	25%

Eaves Trough

Milcor Triplex Wire.....	10%
Milcor Steel (galv. after forming) List.....	plus 12 1/2%
Milcor Selflock B. T. Wire, List.....	plus 50%

HOOKS

Box	
V. & B. No. 1, each.....	\$0 26

Conductor

"Direct Drive" Wrought Iron for wood or brick.....	15%
--	-----

Hay

V. & B. No. 1, each.....	\$0 26
--------------------------	--------

HUMIDIFIERS

"Front-Range" Automatic	
In single lots.....	50c
In lots of 10 or more.....	50-5%
In lots of 25 or more.....	50-10%
Vapor pans, etc., each.....	50%

LIFTERS

Stove Cover	
Coppered.....per gro.	\$8 00
Alaska.....per gro.	4 75

MALLETS

Tinners	
Hickory.....per doz.	\$3 25

MITRES

Galvanized steel mitrea, 28 Ga.....	70
26 Ga.....	60-20

NAILS

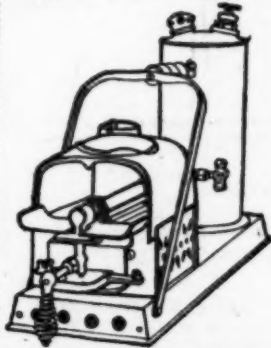
Cut Steel.....	\$4 35
Cut Iron.....	4 25

Wire

Common.....	2 25
Cement Coated.....	2 95

(Continued on Page 170)

Improved Models of Soldering Furnaces



Have you seen the improved models? The greatest line of Soldering Furnaces today on the market. They should be. There is more experience behind them. Forty-eight years of it! The Gems were popular before the majority of present day furnaces were heard of. It is the oldest, the recognized standard Soldering Furnace today.

Look these models over. Each adds its class. Line them up and take your choice.

Do you want a Catalog?

BURGESS SOLDERING FURNACE CO.

Department A COLUMBUS, O.

Improved No. 3 Gem with Pump

-B.B.- LINE OF SHEET METAL SUPPLIES

B.B. CONDUCTOR HOOKS AND GUTTER HANGERS
"SHUR-LOCK" CONDUCTOR PIPE
OCTAGON AND POLYGON CONDUCTOR PIPE
"E-Z FIT" EAVES TROUGH
"QUAKER CITY" MITRES, ENDS, CAPS AND OUTLETS
EAVE TROUGH STRAP AND ROD HANGERS
ORNAMENTAL CONDUCTOR STRAPS AND ENDS

YOUR JOBBER CARRIES THEM IN STOCK FOR PROMPT SHIPMENT

Manufactured by

BERGER BROS. CO.

229 to 237 ARCH STREET

PHILADELPHIA

The NEW IMPROVED "STANDARD" Rotable Ventilator



Patents pending

This favorite cone-shaped ventilator is now improved in several important points.

The weight of the ventilator body is now carried on a concave thrust bearing nested in the apex of the conical body. This bearing turns upon the pivot point of the stationary center spindle.

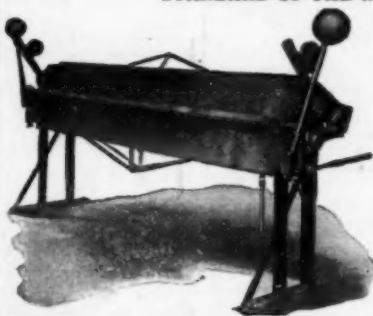
The bronze Guide Bushings are now made of non-corrosive bronze which minimizes friction and any tendency to screech when body is rotating.

There are other new features. Write today for new catalog and price list.

STANDARD VENTILATOR CO.,

LEWISBURG, PA.

CHICAGO STEEL CORNICE BRAKES STANDARD OF THE WORLD



THE BEST BRAKE FOR ALL PURPOSES: Most Durable, Easiest Operated, Low in Price; Made in All Lengths and to Bend All Gauges of Metal. Over 23,000 in use.

WRITE FOR PARTICULARS

DREIS & KRUMP MFG. CO., 7404 Loomis Street, CHICAGO

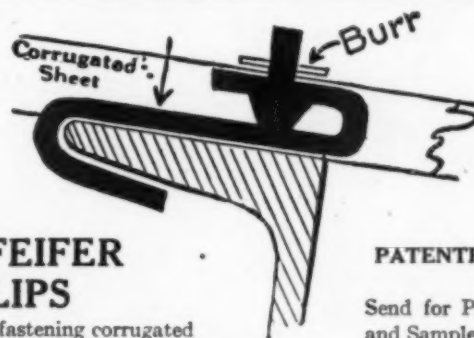
SPECO SOLID SAL AMMONIAC

for

TINNING and CLEANING BETTER and QUICKER

WRITE FOR FREE SAMPLE

SPECIAL CHEMICALS CO.
WAUKEGAN, ILLINOIS



PFEIFER CLIPS

For fastening corrugated roofing and siding.

PATENTED

Send for Price and Sample.

WM. PFEIFER

473 Greenwich St.
New York, N. Y.

The W. J. BURTON CO. Detroit, Michigan

Forty-Four Years
Serving the
Sheet Metal Contractor
with

**SHEET METAL PRODUCTS
FOR BUILDINGS**

ADVERTISERS' INDEX

The dash (—) indicates that the advertisement runs on a regular schedule but does not appear in this issue.

A		M	
Aeolus-Dickinson Co.	—	Majestic Co., The	—
Agricola Furnace Co.	—	Marshalltown Mfg. Co.	—
Akrat Ventilators, Inc.	176	May-Fiebeger Co.	—
American Foundry & Furnace Co.	138	Merchant & Evans Co.	—
American Furnace Co.	141	Meyer & Bro. Co., F.	—
American Rolling Mill Co.	—	Meyer Furnace Co., The.	146
American Steel & Wire Co.	173	Meyers Fuel Saver, Inc.	142
Arex Co.	—	Milwaukee Corr. Co., Back Cover	—
Armstrong Co.	—	Monitor Furnace Co.	136
Automatic Humidifier Co.	—	Mt. Vernon Furn. & Mfg. Co.	—
		Mueller Furnace Co., L. J.	—
B		N	
Barnes Zinc Products Co.	—	National Heatcraft Institute.	176
Beh & Co.	142	New Jersey Zinc Sales Co., The	—
Berger Bros. Co.	163	Northwestern Stove Repair Co.	142
Berger Co., L. D.	—		
Bertach & Co.	173		
Brillon Furnace Co.	141		
Buckeye Products Co.	—		
Burgess Soldering Furnace Co.	169		
Hurton Co., W. J.	169		
C		O	
Calkins & Pearce	—	Osborn Co., The J. M. & L. A.	142
Central Alloy Steel Corp.	163		
Chicago Elbow Machine Co.	171		
Chicago Solder Co.	—		
Clayton & Lambert Mfg. Co.	—		
Cleveland Castings Pattern Co.	142		
Colburn Heater Co.	—		
Connors Paint Co., Wm.	142		
Copper & Brass Research Association	—		
D		P	
Davis Co., Herbert H.	—	Parker-Kalon Corp.	—
Dieckman Co., Ferdinand.	—	Peck, H. E.	176
Diener Mfg. Co., Geo. W.	—	Peck, Stow & Wilcox	171
Double Duty Mfg. Co.	—	Pecora Paint Co.	—
Dreis & Krump Mfg. Co.	169	Pfeifer, Wm.	169
		Prest-O-Lite Co., Inc.	161
E		Q	
Eaglesfield Ventilator Co.	143	Quick Meal Stove Co.	—
		Quincy Pattern Co.	161
F		R	
Fanner Mfg. Co.	143	Robinson, A. H., Co.	138
Forest City Fdy. & Mfg. Co.	139	Robinson Furnace Co.	—
Floral City Heater Co.	—	Rock Island Register Co.	143
Fort Shelby Hotel	173	Rybolt Heater Co.	—
Friedley-Voshardt Co.	—	Ryerson & Sons, Inc., Jos. T.	167
G		S	
Gerock Bros. Mfg. Co.	—	Sheet Steel Trade Ex. Comm.	—
		Special Chemicals Co.	169
H		Standard Furn. & Supply Co.	140
Harrington & King Perf. Co.	167	Standard Ventilator Co.	169
Hart & Cooley Co.	—	St. Louis Heating Co.	—
Henry Furnace & Fdy. Co.	—	St. Louis Tech. Inst.	—
Hess-Snyder Co.	143	Sturtevant Co.	—
Hessler Co., H. E.	173	Success Heater Mfg. Co.	—
Hyro Mfg. Co.	—		
I		T	
Independent Register & Mfg. Co.	—	Taylor Co., N. & G.	167
Inland Steel Co.	167	Technical Products Co.	—
International Heater Co.	—	Teela Sheet Metal Co.	—
K		The Thatcher Co.	—
Keith Furnace Co.	—	Thomas & Armstrong Co.	—
Kernchen Co.	176	Trachte Bros. Co., Inc.	—
Kirk-Latty Co.	142	Tuttle & Bailey Mfg. Co.	145
Kruse Co.	141	XXth Century Htg. & Vent. Co.	—
L		U	
Lamneck & Co., W. E.	—	United States Register Co.	—
Lamson & Sessions Co., The.	142	Utica Heater Co.	137
Langenberg Mfg. Co.	139		
Lennox Furnace Co.	—		
Liberty Foundry Co.	—		
Linde Air Products Co.	—		
Lupton's Sons Co., David.	—		
		V	
		Vail Mfg. Co.	—
		Vedder Pattern Works	142
		Viking Shear Co.	—
		W	
		Walworth Run Fdy. Co.	140
		Warm Air Furnace Fan Co.	—
		Waterman-Waterbury Co.	—
		Western Steel Products Co.	—
		Wheeling Corr. Co.	165
		Whitney Mfg. Co., W. A.	171
		Whitney Metal Tool Co.	—
		Wise Furnace Co.	—
		Y	
		Yard-Boy Incinerator Co.	173

Markets—Continued from page 168

NETTING, POULTRY		ROOFING	
Galvanized before weav- ing	57½-5%	Best grade, slate surf. pre- pared	2 30
Galvanized after weaving	52½-5%	Best talc surfaced	2 60
		Medium talc surfaced	2 00
		Light talc surfaced	1 20
		Red Rosin Sheeting, per ton	57 00
PASTE		SCREWS	
Asbestos Dry Paste:		Sheet Metal	
200-lb. barrel	\$16 00	7, ½x½, per gross	\$0 52
100-lb. barrel	8 75	No. 10, ¾x16, per gross ..	60
35-lb. pail	5 50	No. 14, ¾x½, per gross ..	89
10-lb. bag	1 10		
5-lb. bag	60		
2½-lb. cartons	35		
PIPE		SHEARS, TINNERS' & MACHINISTS'	
Conductor		Viking	\$22 00
Cor. Rd., Plain Rd. or Sq.		Lennox Throatless	
		No. 18	35%
		Shear blades	10%
		(f. o. b. Marshalltown, Iowa.)	
Galvanized			
Crated and nested (all gauges)	75-2½%		
Crated and not nested (all gauges)	70-15%		
Furnace Pipe		SHIELDS, REGISTER	
Double Wall Pipe and Fittings	40-10%	No. 1 "Gem" floor	\$12 00 doz.
Single Wall Pipe, Round		No. 2 "Gem" wall	6 00 doz.
Galvanized Pipe	40-10%		
Galvanized and Tin Fit- tings	40-10%		
Lead		SHOES	
Per 100 lbs.	\$12 50	Galv. 28 Gauge, Plain or cor- rugated round flat crimp	60%
		26 gauge round flat crimp	45%
		24 gauge round flat crimp	15%
Stove Pipe		SNIPS, TINNERS'	
"Milcor" "Titelock" Uniform Blue Stove		Clover Leaf	40 & 10%
28 gauge, 5 inch U. C.	11 50	National	40 & 10%
28 gauge, 6 inch U. C.	13 25	Star	50%
28 gauge, 7 inch U. C.	14 25	Milcor	Net
30 gauge, 5 inch U. C.	19 50		
30 gauge, 6 inch U. C.	11 25		
30 gauge, 7 inch U. C.	13 25		
T-Joint Made up		SQUARES	
6-inch, 28 ga. per doz.	\$ 5.00	Steel and Iron	Net
		(Add for bluing, \$3 per doz. net.)	
All Zinc		Mitre	Net
No. 11, all styles	60%	Try	Net
		Try and Bevel	Net
		Try and Mitre	Net
		For's	per doz. \$6 00
		Winterbottom's	10%
POKERS, STOVE		STOPPERS, FLUE	
Wrt Steel, str't or bent, per doz.	\$0 75	Common	per doz. \$1 10
Nickel Plated coil handles, per doz.	1 10	Gem, No. 1	per doz. 1 10
		Gem, flat, No. 3	per doz. 1 00
POKERS, FURNACE		VENTILATORS	
Each	\$0 50	Standard	30 to 40%
PULLEYS		WIRE	
Furnace Tackle	per doz. \$0 60	Plain annealed wire, No. 8, per 100 lbs.	\$3 05
Furnace	per gro. 6 00	Galvanized barb wire, per 100 lbs.	3 90
Furnace Screw (enameled) per doz.	75	Wire Cloth—black painted, 12-mesh, per 100 sq. ft.	1 65
		Cattle Wire—galvanized catch weight spool, per 100 lbs.	3 65
		Galvanized Hog Wire, 80 rod spool, per spool	3 18
		Galvanized Plain Wire, No. 9, per 100 lbs.	3 40
		Stove Pipe, per stone	1 10
Ventilating Register		WRINGERS	
Per gross	9 00	No. 790, Guarantee	each \$5 10
Small, per pair	30	No. 770, Bicycle	each 4 70
Large, per pair	60	No. 670, Domestic	each 4 35
PUTTY		No. 110, Brighton	each 3 70
Commercial Putty, 100-lb Kits	\$3 40	No. 750, Guarantee	each 5 10
		No. 740, Bicycle	each 4 70
		No. 22, Pioneer	each 3 40
		No. 2, Superb	each 2 65
QUADRANTS			
Malleable Iron Damper	10%		
REDUCERS—Oval Stove Pipe			
Per Doz.			
7-6, 1 doz. in carton	\$2.25		
REGISTERS AND BORDERS— Baseboard, Floor and Wall.			
Cast Iron	20%		
Steel and Semi-Steel	40%		
Baseboard	40%		
Wall	40%		
Adjustable Ceiling Ventilators ..	40%		
Register Faces—Cast and Steel			
Japanned, Bronzed and Plated, 4x6 to 14x14	40%		
Large Register Faces—Cast, 14x14 to 38x42	60%		
Large Register Faces—Steel, 14x14 to 38x42	65%		
RIDGE ROLL			
Galv., Plain Ridge Roll, b'd'd	75-10-5%		
Galv., Plain Ridge Roll crated	75-10%		
Globe Finials for Ridge Roll	50%		

FREE FOR THE ASKING



THE LARGEST
MANUFACTURER
OF ITS KIND IN
THE WORLD



LIVE WIRE
DEALERS
ARE
EVERYWHERE

GUIDE No. 25-A MACHINES AND TOOLS FOR SHEET METAL WORK

Get this splendid volume on file—consult it as frequently as the shop may call for new tools to make your product quicker, easier and better—then let the tools prove the sole judge of all claims made for them.

[108 Years
of conservative growth]

THE PECK, STOW & WILCOX CO., Southington Conn., U. S. A.

Whitney Lever Punches

Widest known—Most universally used



Skylight Punch

**NEW SKYLIGHT
CLOSE CORNER
FLANGE PUNCH**

Every Sheet Metal Worker Needs One.

Weights Only 10 Lbs.

1-2 Inch Opening Above Die Top.



Skylight Punch

**EASIEST OPERATED
QUICKEST CHANGED
FREQUENTLY PAY FOR THEMSELVES
ON FIRST JOB**

Over 40,000 In Use



Channel Iron Punch

MADE IN 8 SIZES AND TYPES

OTHERS FOLLOWING



No. 2 Punch

ASK YOUR JOBBER

or
Write us, for circulars and prices.

**W. A. Whitney
Mfg. Co.
715 Park Ave.,
ROCKFORD, ILL.**



No. 4 Tinner's Punch



No. 8 Punch



*One man made
all these 9 inch
elbows in 4
hours **

ELBOWS ARE CHEAPER

when you make them on a

CHICAGO ELBOW MACHINE

HERE are the facts: Labor is cut in half.

That's the experience of manufacturers, jobbers, dealers and contractors using this efficient machine. Capacity 7 to 36 in. 3 or 4-piece adjustable elbows, tin or galvanized, 24 gauge and lighter.

Make elbows as you need them—quickly—cheaply—economically, with a Chicago Elbow Machine. It pays for itself. Write for full particulars.

THE CHICAGO ELBOW MACHINE CO.

826 North Boulevard

Oak Park, Ill.

BUYERS' DIRECTORY

Acetylene (Gas) Dissolved.
Prest-O-Lite Co., Inc.,
New York, N. Y.

Rails-Ties.
American Steel & Wire Co.,
Chicago, Ill.

Blowers.
Sturtevant Co., B. F., Boston, Mass.

Bolts-Stove.
The Kirk-Latty Co.,
Cleveland, Ohio
Lamson & Sessions Co.,
Cleveland, Ohio
Ryerson & Son, Inc., Jos. T.,
Chicago, Ill.

Brakes-Bending.
Dreis & Krump Mfg. Co.,
Chicago, Ill.
Ryerson & Son, Inc., Jos. T.,
Chicago, Ill.

Brakes-Cornice.
Dreis & Krump Mfg. Co.,
Chicago, Ill.

Brass and Copper.
Copper & Brass Research As-
sociation, New York
Merchant & Evans Co.,
Philadelphia, Pa.

Cans-Garbage.
Osborn Co., The J. M. & L. A.,
Cleveland, Ohio

Castings-Malleable.
Fanner Mfg. Co.,
Cleveland, Ohio

Ceilings-Metal.
Burton Co., The W. J.,
Detroit, Mich.
Friedley-Voshardt Co.,
Chicago, Ill.
Milwaukee Corrugating Co.,
Mil., Ch'go, La Crosse, Kan. City
Wheeling Corrugating Co.,
Wheeling, W. Va.

Chaplets.
Fanner Mfg. Co.,
Cleveland, Ohio

Chimney Tops.
Standard Ventilator Co.,
Lewisburg, Pa.
Vall Mfg. Co.,
Fort Wayne, Ind.

Check Drafts.
Teela Sheet Metal Co.,
Oshkosh, Wis.

Clinker Tongs.
L. J. Mueller Furnace Co.,
Milwaukee, Wis.

Clips-Roofing.
Wm. Pfeiffer,
New York, N. Y.

Coal Chutes.
Majestic Co., The,
Huntington, Ind.

Copper.
Copper & Brass Research As-
sociation, New York

Cornices.
Friedley-Voshardt Co.,
Chicago, Ill.
Milwaukee Corrugating Co.,
Mil., Ch'go, La Crosse, Kan. City

Cut-off-Rain Water.
Milwaukee Corrugating Co.,
Mil., Ch'go, La Crosse, Kan. City
Dampers-Quadrants-Accessories.
Milwaukee Corrugating Co.,
Mil., Ch'go, La Crosse, Kan. City
L. J. Mueller Furnace Co.,
Milwaukee, Wis.
Parker-Kalon Corp.,
New York, N. Y.

Diffuser-Air Duct.
Aeolus-Dickinson Co.,
Chicago, Ill.
L. J. Mueller Furnace Co.,
Milwaukee, Wis.

Doors-Metal.
Lupton's Sons Co., David,
Philadelphia, Pa.

Drive Screws-Hardened Metals.
Parker-Kalon Corp.,
314 West 13th St., New York

Eaves Trough.
Barnes Zinc Products Co.,
Chicago, Ill.

Berger Bros. Co.,
Philadelphia, Pa.

Burton Co., The W. J.,
Detroit, Mich.

Berger Co., L. D.,
Philadelphia, Pa.

Lupton's Sons Co., David,
Philadelphia, Pa.

Milwaukee Corrugating Co.,
Mil., Ch'go, La Crosse, Kan. City

New Jersey Zinc Sales Co., The,
New York, N. Y.

Wheeling Corrugating Co.,
Wheeling, W. Va.

Elbows and Shoes-Conductor.
Barnes Zinc Products Co.,
Chicago, Ill.

Dieckmann Co., Ferdinand,
Cincinnati, Ohio

Double-Duty Mfg. Co.,
Aurora, Ill.

Lupton's Sons Co., David,
Philadelphia, Pa.

Milwaukee Corrugating Co.,
Mil., Ch'go, La Crosse, Kan. City

Engineering-Fan Blast
Warm Air Heating
Herbert H. Davis Co., Inc.,
Chicago, Ill.

Wood Faces-Cold Air.
Eaglefield Ventilator Co.,
Indianapolis, Ind.

Milwaukee Corrugating Co.,
Mil., Ch'go, La Crosse, Kan. City

Fences.
American Steel & Wire Co.,
Chicago, Ill.

Fittings-Conductor.
Barnes Zinc Products Co.,
Chicago, Ill.

Milwaukee Corrugating Co.,
Mil., Ch'go, La Crosse, Kan. City

Five Thimbles.
Milwaukee Corrugating Co.,
Mil., Ch'go, La Crosse, Kan. City

Furnace Cement-Asbestos.
Armstrong Co., The, Detroit, Mich.

Buckeye Products Co., The,
Cincinnati, Ohio

Connors Paint Mfg. Co., Wm.,
Troy, N. Y.

Milwaukee Corrugating Co.,
Mil., Ch'go, La Crosse, Kan. City

Pecora Paint Co., Philadelphia,
Pa.

Furnace Cement-Liquid.
Technical Products Co.,
Pittsburgh, Pa.

Furnace Cleaners-Suction.
Brillion Furnace Co., Brillion, Wis.

Sturtevant Co., B. F., Boston,
Mass.

Furnace Fans.
A. H. Robinson Company,
Cleveland, Ohio

Robinson Furnace Co.,
Chicago

Sturtevant Co., B. F., Boston,
Mass.

Warm Air Furnace Fan Co., The,
Cleveland, Ohio

Furnace Rings.
Milwaukee Corrugating Co.,
Milwaukee, Wis.

Walworth Run Fdy. Co.,
Cleveland, Ohio

Furnaces-Gas.
Calkins & Pearce, Columbus, Ohio

Furnaces-Warm Air.
Agricola Furnace Co.,
Gadsden, Ala.

American Furnace Co.,
St. Louis, Mo.

American Foundry & Furnace
Co.,
Bloomington, Ill.

Brillion Iron Works,
Brillion, Wis.

Calkins & Pearce, Columbus,
Ohio

Colburn Heater Co.,
Chicago, Ill.

Forest City Fdy. & Mfg. Co.,
Cleveland, Ohio

Henry Furnace & Fdy. Co.,
Cleveland, Ohio

Hess-Snyder Co.,
Massillon, Ohio

Homier Furnace Co.,
Coldwater, Mich.

International Heater Co.,
Utica, N. Y.

Keith Furnace Co.,
Des Moines, Ia.

Kruse Co.,
Indianapolis, Ind.

Lamneck Co., W. E.,
Columbus, Ohio

Langenberg Mfg. Co.,
St. Louis, Mo.

Lennox Furnace Co.,
Marshalltown, Ia.

Liberty Foundry Co.,
Syracuse, N. Y.

Majestic Co., The,
Huntington, Ind.

May-Flebeiger Furnace Co.,
Newark, Ohio

Meyer Furnace Co., The,
Peoria, Ill.

Monitor Furnace Co.,
Cincinnati, Ohio

Mt. Vernon Furnace & Mfg. Co.,
Mt. Vernon, Ill.

Mueller Furnace Co., L. J.,
Milwaukee, Wis.

Robinson Furnace Co., A. H.,
Cleveland, Ohio

Robinson Furnace Co.,
Chicago, Ill.

Rybolt Heater Co.,
Ashland, Ohio

Standard Furnace & Supply Co.,
Omaha, Neb.

St. Louis Heating Co.,
St. Louis, Mo.

Success Heater Mfg. Co.,
Des Moines, Iowa

Thomas & Armstrong Co.,
London, Ohio

Thatcher Co.,
Chicago, Ill.

XXth Century Heating & Ventila-
ting Co.,
Akron, Ohio

Utica Heater Co.,
Utica, N. Y.

Waterman-Waterbury Co.,
Minneapolis, Minn.

Western Steel Products Co.,
Duluth, Minn.

Wise Furnace Co.,
Akron, Ohio

Garages-Metal.
Milwaukee Corrugating Co.,
Mil., Ch'go, La Crosse, Kan. City

The Thomas & Armstrong Co.,
London, Ohio

Trachte Brothers Co., Inc.,
Madison, Wis.

Gas (Acetylene) Dissolved.
Prest-O-Lite Co., Inc.,
New York, N. Y.

Gas (Nitrogen).
Linde Air Products Co.,
New York, N. Y.

Gas (Oxygen).
Linde Air Products Co.,
New York, N. Y.

Glass-Wire.
Lupton's Sons Co., David,
Philadelphia, Pa.

Grilles.
Harrington & King Perforating
Co.,
Chicago, Ill.

Hart & Cooley Co.,
New Britain, Conn.

Machines-Tinsmiths.
Bertsch & Co.,
Cambridge City, Ind.

Burton Co., The W. J.,
Detroit, Mich.

Chicago Elbow Machine Co.,
Oak Park, Ill.

Dreis & Krump Mfg. Co.,
Chicago, Ill.

Marshalltown Mfg. Co.,
Marshalltown, Iowa

Osborn Co., The J. M. & L. A.,
Cleveland, Ohio

Peck, Stow & Wilcox Co.,
Southington, Conn.

Ryerson & Son, Inc., Jos. T.,
Chicago, Ill.

Whitney Mfg. Co., W. A.,
Rockford, Ill.

Whitney Metal Tool Co.,
Rockford, Ill.

Mandrels.
Hyro Mfg. Co.,
New York, N. Y.

Metals-Perforated.
Harrington & King Perforating
Co.,
Chicago, Ill.

Miters.
Friedley-Voshardt Co.,
Chicago, Ill.

Milwaukee Corrugating Co.,
Mil., Ch'go, La Crosse, Kan. City

Miters-Eaves Trough.
Barnes Zinc Products Co.,
Chicago, Ill.

Lupton's Sons Co., David,
Philadelphia, Pa.

Milwaukee Corrugating Co.,
Mil., Ch'go, La Crosse, Kan. City

Nails-Hardened Masonry.
Parker-Kalon Corp.,
New York, N. Y.

Nails-Wire.
American Steel & Wire Co.,
Chicago, Ill.

Nitrogen (Gas).
Linde Air Products Co.,
New York, N. Y.

Ornaments-Sheet Metal.
Friedley-Voshardt Co.,
Chicago, Ill.

Gerock Bros. Mfg. Co.,
St. Louis, Mo.

Milwaukee Corrugating Co.,
Mil., Ch'go, La Crosse, Kan. City

Oxygen (Gas).
Linde Air Products Co.,
New York, N. Y.

Paint.
Connors Paint Mfg. Co., Wm.,
Troy, N. Y.

Pecora Paint Co.,
Philadelphia, Pa.

Patterns-Furnace & Stove.
Cleveland Castings Pattern Co.,
Cleveland, Ohio

Quincy Pattern Co.,
Quincy, Ill.

Vedder Pattern Works,
Troy, N. Y.

Pipe and Fittings-Furnace.
Burton Co., The W. J.,
Detroit, Mich.

Henry Furnace & Fdy. Co.,
Cleveland, Ohio

Lamneck Co., W. E.,
Columbus, Ohio

Meyer & Bro. Co., F., Peoria,
Ill.

Milwaukee Corrugating Co.,
Mil., Ch'go, La Crosse, Kan. City

Mueller Furnace Co., L. J.,
Milwaukee, Wis.

Osborn Co., The J. M. & L. A.,
Cleveland, Ohio

Robinson Furnace Co.,
Chicago, Ill.

Standard Furnace & Supply Co.,
Omaha, Neb.

WIRE

electrical, rope, barbed, plain, nails (bright

and coated), tacks, spikes, bale ties, hoops, springs, netting, wire fences, steel posts, steel gates, trolley wire, rail bonds, flat wire, cold rolled strip steel, piano wire, round and odd-shape wire, screw stock, welding wire, concrete reinforcement. Aerial tramways.

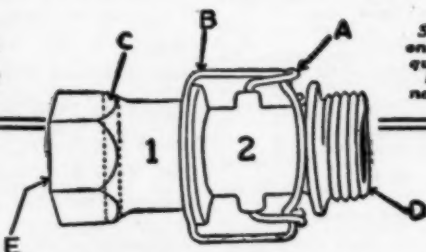
Illustrated books describing uses, FREE

American Steel & Wire

Sales Offices: Chicago, New York and All Principal Cities

Company

The simplest hose coupling made



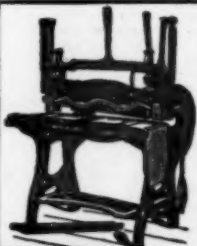
Snaps on or off quickly Does not leak

HESSLER Perfect Hose Connection

YOU and your customers, everybody who uses a hose will welcome the Hessler Hose Connection. It saves hose length and the hose, no kinking or twisting—no splashing, no leakage and you snap it on or off in a wink. The Hessler will be a big, fast seller and a real profit maker. Order a sample lot now—made in four sizes. Write today for price and circulars.

H. E. HESSLER CO.

Syracuse, New York



TREADLE SHEAR

This TREADLE GAP SHEAR is made in all standard sizes for No. 14 and lighter gauge sheets. With it, sheets can be squared, trimmed or slit.

We make a complete line of shears, punches and bending rolls, all sizes for hand or belt drive. Write for Catalog "S."

BERTSCH & COMPANY

Cambridge City, Ind.

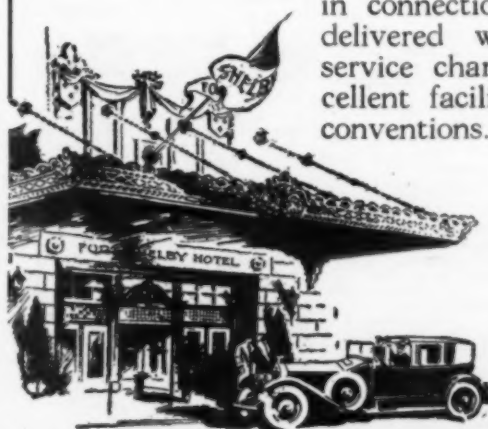
Start now to take pictures of your best Window Displays

Watch for further announcements on the Illinois Travelers Auxiliary Window Display Competition

HOTEL FORT SHELBY LAFAYETTE AND FIRST DETROIT

WHETHER your choice be one of the many very comfortable rooms at \$2.50, \$3 or \$4 or one of the richly furnished suites in the 22-story recent addition, whose sunny bay windows give an entrancing view of city, river and Canadian shore, you will enjoy a special sense of value in Hotel Fort Shelby.

All rooms have Servidors. Convenient to all downtown; principal shops almost at the door. Garage in connection; cars delivered without service charge. Excellent facilities for conventions.



Brochure on request

YOU can earn \$6⁰⁰ daily by just mentioning~



YARD-BOY Martin-Patents SPARK-PROOF INCINERATOR

You are in a position to show this combination Rubbish and Garbage Burner to home-owners by merely having one on your floor for display purposes. The "Yard-Boy" fills a long-felt want with every home owner; it eliminates the garbage can, also the rubbish pile fire hazard. Dry rubbish serves as fuel to burn the garbage.

Thousands of "Yard-Boy" Incinerators in use—are recommended by fire marshals and health officers. One sold in a vicinity sells many others!

The only "spark-proof" and fully enclosed incinerator in the market. Sells at a popular price. Why not add \$6.00 to \$12.00 daily to your income with very little effort? Don't overlook this opportunity—write today!

YARD-BOY INCINERATOR CO.,

10 East Huron Street

Chicago, Ill.

BUYERS' DIRECTORY

- Posts—Steel Fence.**
American Steel & Wire Co., Chicago, Ill.
- Punches.**
Bertsch & Co., Cambridge City, Ind.
Peck, Stow & Wilcox Co., Southington, Conn.
Ryerson & Son, Inc., Jos. T., Chicago, Ill.
Whitney Mfg. Co., W. A., Rockford, Ill.
Whitney Metal Tool Co., Rockford, Ill.
- Punches—Combination Bench and Hand.**
Hyro Mfg. Co., New York, N. Y.
Ryerson & Son, Inc., Jos. T., Chicago, Ill.
Whitney Metal Tool Co., Rockford, Ill.
Whitney Mfg. Co., W. A., Rockford, Ill.
- Punches—Hand.**
Hyro Mfg. Co., New York, N. Y.
Ryerson & Son, Inc., Jos. T., Chicago, Ill.
Whitney Metal Tool Co., Rockford, Ill.
Whitney Mfg. Co., W. A., Rockford, Ill.
- Putty—Stove.**
Connors Paint Mfg. Co., Wm., Troy, N. Y.
Pecora Paint Co., Philadelphia, Pa.
- Radiator Cabinets.**
The Hart & Cooley Mfg. Co., Hartford, Conn.
Tuttle & Bailey Mfg. Co., Chicago, Ill.
- Radiators—Shields.**
Beh & Co., Inc., New York, N. Y.
The Thomas & Armstrong Co., London, Ohio
- Ranges—Combination Gas & Coal.**
Quick Meal Stove Co., St. Louis, Mo.
Thatcher Co., Newark, N. J.
- Ranges—Gas.**
Quick Meal Stove Co., St. Louis, Mo.
- Register Shields.**
Beh & Co., Inc., New York, N. Y.
- Registers—Warm Air.**
Eaglesfield Ventilator Co., Indianapolis, Ind.
Hart & Cooley Co., New Britain, Conn.
Henry Furnace & Fdy. Co., Cleveland, Ohio
Independent Register & Mfg. Co., Cleveland, Ohio
Lamneck & Co., W. E., Columbus, Ohio
Majestic Co., The., Huntington, Ind.
Moyer & Bro. Co., F., Peoria, Ill.
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
Maeiler Furnace Co., L. J., Milwaukee, Wis.
Robinson Furnace Co., Chicago, Ill.
Rock Island Register Co., Rock Island, Ill.
Standard Furnace & Supply Co., Omaha, Neb.
Tuttle & Bailey Mfg. Co., Chicago, Ill.
United States Register Co., Battle Creek, Mich.
Walworth Run Fdy. Co., Cleveland, Ohio
- Registers—Wood.**
Eaglesfield Ventilator Co., Indianapolis, Ind.
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
L. J. Mueller Furnace Co., Milwaukee, Wis.
United States Register Co., Battle Creek, Mich.
- Repairs—Stove and Furnace.**
Hessler Co., H. E., Syracuse, N. Y.
Northwestern Stove Repair Co., Chicago, Ill.
- Ridging.**
American Rolling Mill Co., Middletown, Ohio
Lupton's Sons Co., David, Philadelphia, Pa.
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
- Rivets—Stove.**
The Kirk-Latty Co., Cleveland, Ohio
- Lamson & Sessions Co., Cleveland, Ohio**
Ryerson & Son, Inc., Jos. T., Chicago, Ill.
- Rods—Stove.**
The Kirk-Latty Co., Cleveland, Ohio
Lamson & Sessions Co., Cleveland, Ohio
- Rolls—Forming.**
Bertsch & Co., Cambridge City, Ind.
- Roofing Cement.**
Connors Paint Mfg. Co., Wm., Troy, N. Y.
Pecora Paint Co., Philadelphia, Pa.
- Roof—Flashing.**
Hessler Co., H. E., Syracuse, N. Y.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Roofing—Iron and Steel.**
American Rolling Mill Co., Middletown, Ohio
Burton Co., The W. J., Detroit, Mich.
Friedley-Voshardt Co., Chicago, Ill.
Inland Steel Co., Chicago, Ill.
Merchant & Evans Co., Philadelphia, Pa.
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
Osborn Co., The J. M. & L. A., Cleveland, Ohio
Ryerson & Son, Inc., Jos. T., Chicago, Ill.
Wheeling Corrugating Co., Wheeling, W. Va.
- Roofing—Tin.**
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
Taylor Co., N. & G., Philadelphia, Pa.
Wheeling Corrugating Co., Wheeling, W. Va.
- Roofing—Zinc.**
New Jersey Zinc Sales Co., The., New York, N. Y.
- Rubbish Burners.**
Hart & Cooley Co., New Britain, Conn.
Yardboy Incinerator Co., Chicago
- Sal-Ammoniac.**
Special Chemicals Co., Waukegan, Ill.
- Schools—Sheet Metal Pattern Drafting.**
St. Louis Technical Institute, St. Louis, Mo.
- Schools—Warm Air Heating.**
National Heatcraft Institute, Peoria, Ill.
St. Louis Technical Institute, St. Louis, Mo.
- Screws—Hardened Metallic Drive.**
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
Parker-Kalon Corp., 354 West 13th St., New York
- Screws—Hardened Self-Tapping.**
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
Parker-Kalon Corp., 354 West 13th St., New York
- Screens—Perforated Metal.**
Harrington & King Perforating Co., Chicago
- Shears—Hand and Power.**
Double-Duty Mfg. Co., Aurora, Ill.
Marshalltown Mfg. Co., Marshalltown, Iowa
Peck, Stow & Wilcox Co., Southington, Conn.
Ryerson & Son, Inc., Jos. T., Chicago, Ill.
Viking Shear Co., Erie, Pa.
- Sheets—Steel—Lead.**
Wheeling Metal & Mfg. Co., Wheeling, W. Va.
- Sheet Metal Screws—Hardened, Self-Tapping.**
Parker-Kalon Corp., 354 West 13th St., New York
- Sheets—Black and Galvanized.**
American Rolling Mill Co., Middletown, Ohio
Burton Co., The W. J., Detroit, Mich.
Central Alloy Steel Corp., Massillon, Ohio
Inland Steel Co., Chicago, Ill.
Merchant & Evans Co., Philadelphia, Pa.
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
Osborn Co., The J. M. & L. A., Cleveland, Ohio
Ryerson & Son, Inc., Jos. T., Chicago, Ill.
Taylor Co., N. & G., Philadelphia, Pa.
Wheeling Corrugating Co., Wheeling, W. Va.
- Sheets—Iron.**
American Rolling Mill Co., Middletown, Ohio
Central Alloy Steel Corp., Massillon, Ohio
Merchant & Evans Co., Philadelphia, Pa.
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
Ryerson & Son, Inc., Jos. T., Chicago, Ill.
- Sheets—Tin.**
Merchant & Evans Co., Philadelphia, Pa.
Taylor Co., N. & G., Philadelphia, Pa.
- Sheets—Zinc.**
New Jersey Zinc Sales Co., The., New York, N. Y.
- Shingles and Tiles—Metal.**
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
Wheeling Corrugating Co., Wheeling, W. Va.
- Shingles—Zinc.**
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
- Sifters—Ash.**
Diener Mfg. Co., G. W., Chicago, Ill.
- Sky Lights.**
Lupton's Sons Co., David, Philadelphia, Pa.
Michigan Fireproof Skylight Co., Benton Harbor, Mich.
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
- Snips.**
Peck, Stow & Wilcox Co., Southington, Conn.
Ryerson & Son, Inc., Jos. T., Chicago, Ill.
- Solder.**
Chicago Solder Co., Chicago, Ill.
Double-Duty Elbow Co., Aurora, Ill.
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
- Soldering Furnaces.**
Burgess Soldering Furnace Co., Columbus, Ohio
Clayton & Lambert Mfg. Co., Detroit, Mich.
Diener Mfg. Co., G. W., Chicago, Ill.
Double Blast Mfg. Co., North Chicago, Ill.
Quick Meal Stove Co., St. Louis, Mo.
Ryerson & Son, Inc., Jos. T., Chicago, Ill.
- Soldering Supplies.**
Double-Duty Elbow Co., Aurora, Ill.
Special Chemicals Co., Waukegan, Ill.
- Specialties—Hardware.**
Diener Mfg. Co., G. W., Chicago, Ill.
Hessler Co., H. E., Syracuse, N. Y.
- Stars—Hard Iron Cleaning.**
Fanner Mfg. Co., Cleveland, Ohio
- Statuary.**
Friedley-Voshardt Co., Chicago, Ill.
- Gerock Bros. Mfg. Co., St. Louis, Mo.**
- Stove Pipe Reducers.**
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
- Stoves—Camp.**
Quick Meal Stove Co., St. Louis, Mo.
- Stoves—Gasoline and Oil.**
Quick Meal Stove Co., St. Louis, Mo.
- Stoves and Ranges.**
Quick Meal Stove Co., St. Louis, Mo.
Thatcher Co., Newark, N. J.
- Tacks, Staples, Spikes.**
American Steel & Wire Co., Chicago, Ill.
- Tinplate.**
Burton Co., The W. J., Detroit, Mich.
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
Osborn Co., The J. M. & L. A., Cleveland, Ohio
Taylor Co., N. & G., Philadelphia, Pa.
- Tools—TinSmith's.**
Bertsch & Co., Cambridge City, Ind.
Burton Co., The W. J., Detroit, Mich.
Chicago Elbow Machine Co., Oak Park, Ill.
Double-Duty Mfg. Co., Aurora, Ill.
Dries & Krump Mfg. Co., Chicago, Ill.
Hyro Mfg. Co., New York, N. Y.
Marshalltown Mfg. Co., Marshalltown, Iowa
Osborn Co., The J. M. & L. A., Cleveland, Ohio
Peck, Stow & Wilcox Co., Southington, Conn.
Ryerson & Son, Inc., Jos. T., Chicago, Ill.
Viking Shear Co., Erie, Pa.
Whitney Mfg. Co., W. A., Rockford, Ill.
Whitney Metal Tool Co., Rockford, Ill.
- Torches.**
Burgess Soldering Furnace Co., Columbus, Ohio
Clayton & Lambert Mfg. Co., Detroit, Mich.
Diener Mfg. Co., G. W., Chicago, Ill.
Quick Meal Stove Co., St. Louis, Mo.
Ryerson & Son, Inc., Jos. T., Chicago, Ill.
- Trade Extension.**
Copper & Brass Research Association, New York, N. Y.
Sheet Steel Trade Extension Committee, Pittsburgh, Pa.
- Trimnings—Stove.**
Fanner Mfg. Co., Cleveland, Ohio
- Ventilators.**
Aeolus Dickinson Co., Chicago, Ill.
Akrot Ventilators, Inc., Chicago, Ill.
Arex Company, Chicago, Ill.
Berger Bros. Co., Philadelphia, Pa.
Friedley-Voshardt Co., Chicago, Ill.
Kernchen Co., Chicago, Ill.
Lupton's Sons Co., David, Philadelphia, Pa.
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
Royal Ventilator Co., Philadelphia, Pa.
Standard Ventilator Co., Lewisburg, Pa.
Sturtevant Co., Boston, Mass.
- Ventilators—Ceiling.**
Eaglesfield Ventilator Co., Indianapolis, Ind.
Hart & Cooley Co., New Britain, Conn.
Henry Furnace & Fdy. Co., Cleveland, Ohio
Tuttle & Bailey Mfg. Co., New York
Sturtevant Co., B. F., Boston, Mass.
- Windows—Steel.**
Lupton's Sons Co., David, Philadelphia, Pa.
- Wire—Electrical.**
American Steel & Wire Co., Chicago, Ill.
- Wire Hoops.**
American Steel & Wire Co., Chicago, Ill.
- Wire Rope.**
American Steel & Wire Co., Chicago, Ill.
- Zinc.**
Merchant & Evans Co., Philadelphia, Pa.
New Jersey Zinc Co., The., New York, N. Y.

WANTS AND SALES

Any yearly subscriber to **AMERICAN ARTISAN** may insert advertisements of not more than fifty words in our Want and Sales Columns **WITHOUT CHARGE**.

Such advertisements, however, must be limited to help or situation wanted, tools or equipment for sale, to exchange or to buy, business for sale or location desired.

BUSINESS CHANCES

Lightning Rods—Dealers who are selling Lightning Protection will make money by writing us for our latest Factory to Dealer Prices. We employ no salesmen and save you all overhead charges. Our Pure Copper Cable and Fixtures are endorsed by the National Board of Fire Underwriters and hundreds of dealers. Write today for samples and prices. L. K. Diddle Company, Marshfield, Wisc.

Partner Wanted—One who is a good mixer and a first-class hardware man to join me in starting a hardware store. I now have a plumbing and sheet metal shop, doing a fine business. This is a nice, clean town and a good, healthy climate. Good opportunity here. Have party who will build a store building to suit. Address F. A. Struck Plumbing & Sheet Metal Works, Golden, Colo. 10-3t

For Sale—Warm Air heating and sheet metal shop. Fully equipped for any kind of sheet metal work including half-ton truck. Good growing manufacturing town in northern Illinois. 12,000 population. Will sell reasonably. Address A-455, **AMERICAN ARTISAN**, 620 So. Michigan Avenue, Chicago, Illinois.

For Sale—Stove patent that is a great improvement and much more efficient than any stove now made. Will burn any kind of fuel. Can be made up as an ordinary heating stove, parlor furnace or furnaces of the larger type. Address W. E. Toler, Pawnee, Oklahoma. W455

For Sale—Tin shop in good town of 1200 population. Rich country. Poor health reason for selling. Reasonable rent. Address B-455, **AMERICAN ARTISAN**, 620 So. Michigan Avenue, Chicago, Illinois.

Wanted—Mueller or Gilt Edge furnaces or any other high grade make. If prices are right will buy entire lot. State full particulars in first letter. Address S-455, **AMERICAN ARTISAN**, 620 South Michigan, Chicago.

Wanted—From nearby source, 1 No. 2751 Jewel furnace without castings. When writing state lowest cash price. Butters-Fetting Co., 461 11th Ave., Milwaukee, Wis. R455

For Sale—Good clean stock of hardware in Central Illinois city. Will make right price for quick sale. Address P. O. Box 97, Lincoln, Illinois. 10-3t

Wanted—Used National cash register. Give number, description and lowest cash price. Address B. 101, **AMERICAN ARTISAN**, 620 S. Michigan Ave., Chicago, Ill. 10-3t

For Sale—Well established sheet metal, heating and roofing business. Address T-455, **AMERICAN ARTISAN**, 620 South Michigan, Chicago.

Wanted—To get in connection with a sheet metal worker who has his own set of machines and wants to move his equipment into a better location and take up an established business. For particulars write L. T. Petersen, Denison, Iowa. 10-3t

SITUATION WANTED

Capable sheet metal worker and pattern cutter, also Al furnace man, wants position. 18 years' experience. Steady and reliable. Desire steady employment with reliable firm in Missouri or adjoining states. State full particulars and wages. Address American Artisan, 620 South Michigan, Chicago. A-456

Situation Wanted—By an allaround in a good general jobbing shop with a reliable firm. Can lay out and complete my own furnace, heating and ventilating work. Have been at the trade for 25 years. Nothing but steady job considered. Address P. S. McGuffin, 1714 Second Street, Detroit, Michigan. D-456

Wanted—Position by a general all-around sheet metal worker and layout man. 25 years' experience in all branches. None but steady year-round job considered. Prefer northern Illinois. Address A. E. Herrold, 401 W. Franklin Street, Elkhart, Indiana. E-455

Wanted—Galvanized and black sheet mill to represent in Michigan on commission basis. Large acquaintance with carload buyers. Have headquarters in Detroit. Stenographer and phone service. Address Z 455, **AMERICAN ARTISAN**, 620 South Michigan Avenue, Chicago, Illinois.

Combination Man can handle sheet metal work, hot water, steam and furnace work. Al references. West preferred. Job must be year around proposition. Address H S. G., 1031 Tyson Street, Syracuse, New York. C-456

Situation Wanted—By a first class all-around sheet metal worker and pattern cutter as working foreman with 25 years at the trade. South preferred. Address P. O. Box 522, Anderson, S. C. D-455

Situation Wanted—By young tinner with 12 years' experience. Warm air heating a specialty. Address J. H. Den-nick, 742 North First Street, Rockford, Illinois. B-456

Situation Wanted—By a first-class sheet metal worker and warm air furnace installer. Steady and reliable. Address B. 103, **AMERICAN ARTISAN**. 10-3t

HELP WANTED

Wanted at Once—First-class furnace salesman. One who is a live wire and not afraid of work. Must be able to estimate and make own layouts. A dandy proposition for the right man. A city of approximately seventy-five thousand population in southern Michigan. Would like to hear from someone at once. Address B. 102, **AMERICAN ARTISAN**, 620 S. Michigan Ave., Chicago, Ill. 10-3t

Sheet Metal Workers wanted for school house ventilation work. Job is ready and can come at once. Must be union men and understand ventilation work. State experience. Address G-455, **AMERICAN ARTISAN**, 620 South Michigan Avenue, Chicago, Illinois.

Situation Wanted—By a first-class tinner, plumber and can do furnace work, also steam, hot water and repairing of all kinds. Want steady job and can come any time. State wages. Married man. Address Y-455, **AMERICAN ARTISAN**, 620 South Michigan, Chicago.

Situation wanted by good sheet metal and furnace man. Can do plumbing. Will go to work any time. Steady job preferred. Can give Al references. Married. Address X-455, **AMERICAN ARTISAN**, 620 South Michigan, Chicago.

Wanted—Good tinner and furnace man who is looking for a steady job. No dead beats need apply. This is a good steady job for the right man. Address Q-455, **AMERICAN ARTISAN**, 620 South Michigan, Chicago, Ill.

HELP WANTED

Tinner—First class, experienced for for roofing, guttering and outside work. State age and what work you can do and do right. Jno. F. Cartwright, Bowling Green, Kentucky. C-455

Wanted at Once—First class sheet metal workers, experienced on ventilation or blow pipe work. Steady work. Address Swords Bros. Co., Rockford, Illinois. E-456

TINNERS' TOOLS

For Sale—1 Chicago Steel Cornice Brake (Dreis and Krump); 1 36-inch roller (Peck, Stow and Wilcox); 1 five-in-one combination tool (edging, crimp, bead, thick and thin edge); 1 air pump with equipment for radiator repairing; 1 1-ton Ford truck; and smaller tools. All in A-1 condition. Address Karl F. Hedberg, 179 6th Avenue, Brooklyn, New York. 10-3t

For Sale—One set of tinner's tools including 8 foot brake, radiator repair equipment. Will be sold very reasonably. Send for complete list. Address G-456, **AMERICAN ARTISAN**, 620 South Michigan Avenue, Chicago.

Wanted to Buy—Lyon Conklin cross lock seamer for putting tin in rolls. State price, condition and how long used. Will pay fair price for same. H. L. McArdle & Son, Troy, Alabama. F-456

Wanted to Buy—8- or 10-foot steel brake. Give full particulars and price in first letter. Address P-455, **AMERICAN ARTISAN**, 620 South Michigan, Chicago.

For Sale—One set tinner's tools; good condition; price reasonable. Apply Redlich & Son, Jerseyville, Ill. O455

Manufacturers of Warm Air Heaters

HERE'S the salesman
you're looking for.

He can help you in that sales drive that you are putting on—he gets results—he knows the game—he knows the trade and he is well known and respected by thousands of live, high class warm air heater installers throughout the country and especially in the middle west and west.

He has called on the trade and sold warm air heaters for many years—yet he's an up-to-date salesman who works every week of the year—rain or shine.

This salesman's name is
AMERICAN ARTISAN

and you can secure his services at once.

Write today and get complete details concerning his ability to work for you and with your regular salesmen.

BOOKS

The Ventilation Handbook, by Charles L. Hubbard. A practical book designed to cover the principles and practice of ventilation as applied to furnace heating, ducts, flues and dampers for gravity heating; fans and fan works for ventilation and hot blast heating by means of a comprehensive series of questions, answers and very plain descriptions easy to understand. Price \$2.00. Order from Book Dept., AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

Kinks and Labor Saving Methods for Sheet Metal Workers, Vols. 1 and 2—Volume I. There are hundreds of ideas and expedients, all contributed by sheet metal workers throughout the country, illustrated by cuts and original drawings. Cloth bound. Size 4½x7 inches. Price \$1.00. Volume II written in same popular style as Volume I. Places at your disposal a comprehensive collection of ingenious ways of executing many practical tasks in much more simple way than if done in the regulation manner. Also contains special articles on Automobile Repairing; gives a very practical series of illustrated directions on erecting metal ceilings with ten guide rules which will save time, trouble and expensive mistakes. Price \$1.00. Order from Book Dept., AMERICAN ARTISAN, 620 South Michigan Avenue Chicago, Illinois.

Exhaust and Blow Piping, by Hayes—Exhaust and Blow Piping has had an unusually big demand. A fresh supply is now off the press and is in our hands for immediate delivery. It has an invaluable treatise on the planning, cost, estimation and installation of fan piping in all its branches giving all necessary guidance in fan work blower and separator construction. 159 pages, 5x8. 51 figures. Cloth, \$2.00. Order from Book Dept., AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

Sheet Metal Duct Construction, by Neubecker—A treatise on the construction and erection of heating and ventilating ducts, including the cutting and forming of the metal, the laying out of the elbows, etc. A practical expert wrote this book and you'll find that it covers the subject thoroughly. By William Neubecker. Bound in cloth, 194 pages, 217 illustrations. Size 5½x8½ inches. Price \$2.00. Order from Book Dept., AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

SPECIAL NOTICES

The Rate for Special Notices
— displayed want ads —
\$3.00 per inch per insertion.

PATENTS

HUBERT E. PECK
Patent Attorney
Barrister Bldg., WASHINGTON, D. C.

SALESMEN WANTED

Are open for applications for stove and furnace salesmen in different territories for 1928. Only experienced men with good sales records apply. Address L455, American Artisan, 620 S. Michigan Ave., Chicago.

SPECIAL NOTICES

SALESMAN WANTED

Wanted—Experienced salesman calling on furnace trade to sell high grade steel furnaces on liberal commission basis. Exclusive territories available. State in confidence lines handled and territory covered. All present representatives know of this advertisement. Address M455, American Artisan, 620 S. Michigan Ave., Chicago.

FOR SALE

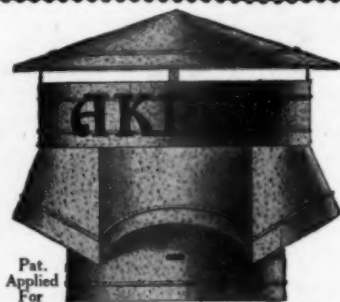
Gas Range patterns ready for production, consisting of two sizes cabinet gas range and one three-burner cooker, of the latest flush front design. This equipment is all aluminum match plates ready for the sand and can be bought at a very reasonable price. Photographs and specifications can be obtained by writing K-455, American Artisan, 620 South Michigan Avenue, Chicago.

WANTED—FURNACE SALESMAN

An experienced warm air furnace salesman to sell dealers and in turn help dealers sell consumers in the state of Ohio for 1928. Address H-456, care of American Artisan, 620 South Michigan Avenue, Chicago, Illinois.

Manual of Automotive Radiator Construction and Repair, by F. L. Curfman and T. H. Leet—Anyone interested in Radiator Repairing will find the 185 pages of practical instructions and the 120 illustrations showing actual construction and repairing a big help. In a condensed manner some four to five thousand answers to questions are given. It is thoroughly practical as both authors are men of wide experience in this work. Printed in large, easy to read type. Measures 5¼x9 inches. Price \$2.50. Order from Book Dept., AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

SPECIAL NOTICES



Pat.
Applied
For

FOR BETTER RESULTS

QUALITY—SERVICE
WRITE FOR PRICES AND
COMPLETE INFORMATION

AKRAT VENTILATORS, INC.
1191 Builders Bldg. CHICAGO

THE STANDARD FOR MANY YEARS

It Pulls Business Your Way!

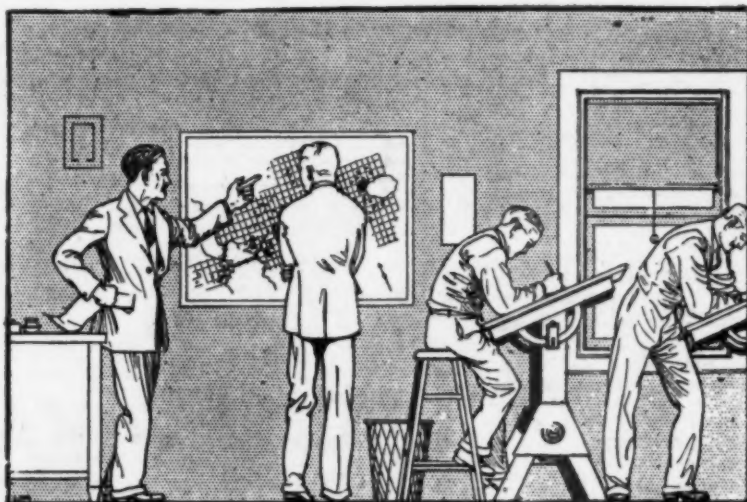
KERNCHEN SIPHONAGE
VENTILATOR



SUPPLY your
next job with
"K.S.V." and you
never will have
a complaint.
Complete stock
on hand for
prompt shipment.

Write to-
day for
complete
data
and prices
Made only by

KERNCHEN COMPANY
Ventilating Engineers
Room 1576, 113 W. WASH. ST., CHICAGO

SPECIAL SHORT COURSES
IN WARM AIR HEATING

1. Draughting. (Class room instruction or correspondence.)
2. Engineering. " " " "
3. Merchandising. (Class room instruction and actual practice.)

Write for Catalog

NATIONAL HEATCRAFT INSTITUTE

282 Main St.
Peoria, Illinois

When writing mention AMERICAN ARTISAN—Thank you!

On every job

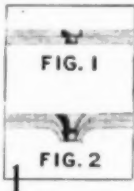


—these Screws
save time,
labor and money

By cutting their own thread in the metal as they are screwed in, PARKER-KALON Hardened Self-Tapping SHEET METAL SCREWS save from 50% to 75%. They eliminate the costly tapping operation and make better fastenings than machine screws, stove bolts, etc.—fastenings which have remarkable holding power even under vibration.

Anyone who knows how to use a screw driver can successfully apply these unique Screws. Just two simple operations—no skill required:

1st. Punch or drill a hole as in Fig. 1; or pierce a hole as in Fig. 2.



2nd. Turn in the Screw with a screw driver



More than 35,000 sheet metal shops are using these Screws for joining sheet metal and making fastenings to sheet metal. They are turning out better and neater work—and saving 50% to 75% over previous methods. They use them for joining ventilating ducts; putting up stove and furnace pipe; joining sections of cornices and attaching ornaments to cornices; fastening metal trim to hollow metal windows and doors; and for many other purposes.

PARKER-KALON CORPORATION
354 West 13th Street New York, N. Y.

Distributed in Canada by
AIKENHEAD HARDWARE LIMITED
17-21 Temperance St. Toronto 2, Ontario.

PARKER-KALON
HARDENED SELF-TAPPING
Sheet Metal Screws

PATENTED
APR. 1, 1919—No. 1299232—MAR. 28, 1922—No. 1411184
AUG. 14, 1923—No. 1465148—FEB. 10, 1925—No. 1526182
OTHERS PENDING

Send for
FREE samples
and try these remarkable
time - and - labor - saving
Screws. Then you will see
why more than 35,000
sheet metal shops wouldn't
be without them!
PARKER-KALON
Hardened Self-Tapping
SHEET METAL
SCREWS are stocked by
more than 500 jobbers of
tinnery supplies. If your
jobber does not carry them,
we will gladly give you
the name of one near you
who does.

Other
PARKER-KALON
Time-and-Labor-
Saving
PRODUCTS

PARKER-KALON
Hardened
MASONRY NAILS
(Patented)



The only Nail expressly
designed for making fasten-
ings to brick, mortar, con-
crete, etc. Easier, quicker
and cheaper to use than
expansion bolts, lead
anchors, plugs, etc.

PARKER-KALON
DAMPER QUADRANTS
(Patented)



Conceded to be the simplest,
neatest and most efficient
device for controlling dam-
pers in hot and cold air
ducts, blow pipes, etc.

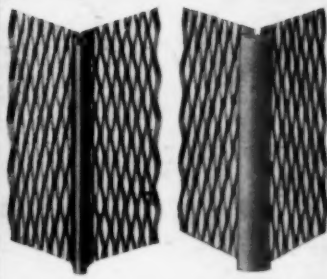
THE EASIEST, QUICKEST AND CHEAPEST WAY
OF JOINING SHEET METAL AND MAKING FASTENINGS TO SHEET METAL

MILCOR

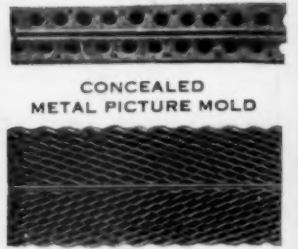
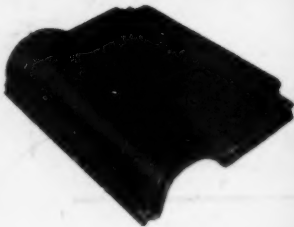
Sheet Metal Products



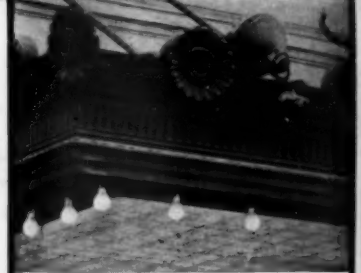
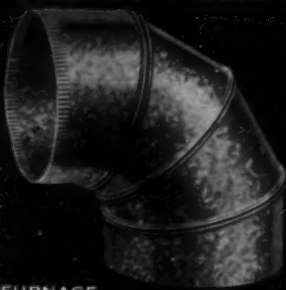
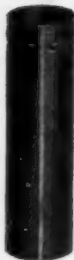
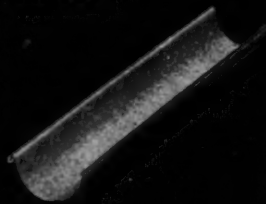
STAY RIB METAL LATH

EXPANSION CORNER BEAD
NO. 1 NO. 10

NETMESH METAL LATH

CONCEALED
METAL PICTURE MOLDEXPANSION
BASE SCREEDSPANISH
METAL TILE ROOFINGALPINA
AND NUAIR VENTILATORS

BARN VENTILATORS

MARQUEES
AND METAL CEILINGSFURNACE
PIPE
ELBOWS—ALL SIZESSTOVE PIPE
AND ELBOWSFURNACE
PIPE AND
FITTINGSCRIMPEDGE
GUTTERAND
ACCESSORIESCONDUCTOR
PIPE
ELBOWSAND
PIPES

The Line that Pays You Well!

ONE Milcor Product suggests the others. It is easier for you to make complete sales with this extensive line of sheet metal building products. Milcor quality is embodied in each article. Better products are not made. Better service is not available. It pays to concentrate on this complete line because your Trade appreciates Milcor quality and service.

Consult your Net Price Book daily!

MILWAUKEE CORRUGATING COMPANY — Milwaukee, Wisconsin
CHICAGO, ILL. KANSAS CITY, MO. LACROSSE, WIS.

